

Functionality and Capability of High Performance Training Centres (HPTCs) - 2017

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Executive Summary

Very little data is publicly available that would compare and contrast high performance training centres (HPTC) from across the world. Based on conversations between the authors and various Association of Sport Performance Centres (ASPC) members it was clear that there is no data or evidence for describing the functionality and/or capability of the different training centers around the world. This presents potential difficulties in a number of different areas, including but not limited to the following:

- > Lack of performance and infrastructure benchmarks for Training Center operations,
- ➤ Lack of "evidence" necessary for evidence based and comparative program evaluation.
- Lack of "evidence" necessary for evidenced-based strategic planning, and
- ➤ Lack of evidence to justify or rationalize Training Center design and/or growth and development.

Based on the apparent lack of information, the authors agreed to undertake a voluntary survey designed to collect data specifically related to HPTC operating models as well as the structure and function of the ASPC members' capacity to service sport organizations, athletes and coaches.

A survey was developed to address specific questions relating to the structure, function and capability of HPTCs. Questions were pre-tested on a small group of experts with experience in operating and/or developing HPTCs in different countries. Based on feedback from the pre-test, a final set of questions were compiled and translated into English, Spanish and French. Surveys were then created using Survey Monkey.

The survey included 53 total questions covering 8 specific areas of interest. Surveys were sent to senior leaders from 79 ASPC members in 31 different countries. Overall, there were 30 total respondents; which represented a 38% response rate. However, 2 respondents only answered 1 question each, which therefore means that the effective return rate was 28 out of 79; which corresponded to an effective return rate of 35%.

Region	Number of Responding HPTCs
Europe	16
Oceania	9
North America	4
South America	0
Africa	2
Asia	1

Further, in order to explore potential differences between countries with different Summer Olympic ranking (Top 20 vs. >20 Olympic Ranking) and/or HPTCs with a National vs. Regional/State/Provincial (R/S/P) focus, respondents were divided into 4 groups.

The report focuses on 8 key areas of interest as follows:

- 1. Service areas type and performance level of athletes serviced.
- **2. Capacity and Specialization –** size and scope of athlete services and areas of specialization.
- **3. Services and Capabilities** type and capacity of Sports Medicine and Sport Sciences services offered.
- 4. Athlete and/or Coach Career/Education/Life Management Services (Dual Career) general life management related services and post-sport career management.
- **5. Facilities and Food Services** the variety and type of training facilities available in HPTCs., and Food Service options
- **6. Staff Capacity** number and qualification/skill areas of staff
- 7. Finances revenue sources and size of budgets.
- **8. Affiliations/Partnerships** official status as a preferred or designated Training Centre by National, International and/or other sport organizations.

A wide assortment of questions was asked so as to provide an opportunity for individual Centers to:

- Look at trends in the development of HPTC,
- Look at the key elements necessary in the day to day operation of HPTCs,
- Compare performance and infrastructure benchmarks for HPTC operations,
- > Review objective data necessary for comparative program evaluation,
- Show comparative data necessary for evidenced-based strategic planning for HPTCs, and
- Present reliable data necessary to justify or rationalize HPTC design and/or upgrades/enhancements.

Detailed statistical analysis has not been done at this time. As such the data is provided as reported so that individual Centers can draw their own conclusions, make their own observations and do their own comparisons according to their context, size and status.

Background to the Survey

This analysis of the functionality and capability of High Performance Training Centers (HPTCs) show the results of an international survey intended to provide information on the capacities and functionalities of members of the Association of Sport Performance Centers (ASPC).

The data is intended to provide:

- Performance and infrastructure benchmarks for HPTC operations,
- Objective data necessary for comparative program evaluation,
- Data necessary for evidenced-based strategic planning for HPTCs, and
- Data necessary to justify or rationalize HPTC design and/or upgrades/ enhancements.

In order to meet the above-mentioned objectives, a survey was designed to collect data specifically related to HPTC operating models as well as the structure and function of the ASPC members' capacity to service sport organizations, athletes and coaches.

Research approval was obtained from ASPC Executive according to their current Research guidelines.

Design and Structure of the Survey

A survey was developed to address specific questions relating to the structure, function and capability of HPTCs. Questions were pre-tested on a small group of experts with experience in operating and/or developing HPTCs in different countries. Based on feedback from the pre-test, a final set of questions were compiled and translated into English, Spanish and French. Surveys were then created using Survey Monkey.

The survey included 53 total questions covering 8 specific areas of interest. The areas of interest were as follows:

1. Who Do You Service?

This included questions relating to the type and performance level of athletes serviced.

2. Capacity and Specialization

This included questions relating to the total number of athletes serviced in different capacities, and the type of athletes serviced in terms of Summer/Winter, Olympic/Paralympic or other areas of specialization (e.g. specific sports or groups of sports - aquatic, combat, acrobatic etc.).

3. Services and Capabilities

This included questions relating to the type and capacity of Sports Medicine and Sport Sciences service provision.

4. Athlete, Career & Education- Life Management Services

This included questions relating to general life management related services and post-sport career management.

5. Facilities

This included questions relating to the variety and type of training facilities available in HPTCs.

6. Food Services

This included questions relating to the scope of food services provided in HPTCs.

7. Finances

This included questions relating to the financial elements of HPTCs (e.g. government and/or private financial support, and size of budgets).

8. Affiliations and Partnerships

This included questions relating to any official status as a preferred or designated Training Centre by National, International and/or other sport organizations.

Response Rate

Surveys were sent to 79 ASPC members in 31 different countries. Overall, there were 30 total respondents; which represented a 38% response rate. However, 2 respondents only answered 1 question each, which therefore means that the effective return rate was 28 out of 79; which corresponded to an effective return rate of 35%.

Categorizing Respondents

In order to explore potential differences between countries with different Summer Olympic ranking (Top 20 vs. >20 Olympic Ranking) and/or HPTCs with a National vs. Regional/State/Provincial (R/S/P) focus, respondents were divided into 4 groups as per **Table 1** below.

Classification of HPTCs

Table 1 – Classification of participating HPTCs

Countries Ranked in Top 20 Summer Olympic Ranking (based on medal ranking at the 2016 Summer Olympic Games)	N=15
Countries greater than Top 20 Summer Olympic Ranking (based on medal ranking at the 2016 Summer Olympic Games)	N=13
National Training Centres*	N=14
Regional/Provincial/State (R/S/P) Training Centers*	N=14

^{*}National vs. Regional/Provincial/State Training Center identification was based on self-reporting in Question 4 of the Survey.

Respondents

There were several different job titles listed for respondents. For ease of description we have divided these into "Director" level roles (CEOs, Presidents, Directors etc.) and "Manager" level (including Support Services Coordinator, Manager Athlete Services, Communications/Publicity Officers etc.).

Table 2 – Position of person completing the Survey

Job Title of Respondents	Number
Director (CEOs, Presidents, Directors etc.)	20
"Manager" (Support Services Coordinator, Manager	
Athlete Services, Communications/Publicity Officers	5
etc.)	

Geographical Distribution

Surveys were completed from respondents according to the following geographical regions:

Table 3 – Geographical distribution of participating HPTCs

Region	Number of Responding HPTCs
Europe	16
Oceania	9
North America	4
South America	0
Africa	2
Asia	1

Analysis of Results

- ➤ Not all Centers answered every question on the survey. As such, the number of responses and/or percentage calculations are not always equal for every question.
- > Percentage calculations are rounded up or down to the nearest full percentage point; therefore, percentage totals may not always total exactly 100%.

NOTE:

Detailed statistical analysis has not been done at this time. As such the data is provided as reported so that individual Centers can draw their own conclusions, make their own observations and do their own comparisons according to their context, size and status.

Section 1 - Service Areas

Data in this Section relate to the number and type of athletes serviced by Training Centers. "Type" of athletes refers to their level of training and/or performance such as Senior, Junior or Development level. Data is also provided about whether or not Centers service Paralympic Athletes/Athletes With a Disability (AWAD), as well as the amount of time of staff and/or facility usage allocation to the different athlete groups.

Number of athletes (categorized as either RESIDENT, CAMP or DAY athletes serviced in a typical year).

NOTE: For this question, "Service" is calculated as an individual athlete who receives service NOT the number of individual service(s) provided to an athlete.

The following (8) Tables show the number athletes serviced by Centers in specific ranges, for specific classifications of athletes. Athlete classifications are:

- > <u>Senior</u> level athletes,
- > Junior level athletes,
- > Developmental level athletes,
- > Visiting International athletes (at any level).

Each of the above groups of athletes was grouped according to:

- Athletes **resident** in their Center (for periods longer than 6 months),
- Athletes accessing the Center on a "training camp" basis,
- Athletes accessing the Center on a "day basis".

Tables 4 - 7 compare the number of athletes serviced between Centers in countries ranked in the Top 20 Olympic ranking vs. Centers in countries ranked greater than 20 (in 2016 Summer Olympic ranking).

Tables 8 - 11 compare National Centers vs. Regional/State/Provincial (R/S/P) Centers.

Table 4 – Number of athletes serviced in a typical year – for Visiting International athletes – for Centers ranked in the Top 20 Olympic Ranking vs. Centers ranked in countries with a >20 Olympic Ranking.

(NOTE: The numbers in each cell represent <u>the total number of Centers</u> servicing athletes in each category. e.g. 14 Top 20 Centers serviced 0 Visiting International resident athletes, 1 Top 20 ranked Center serviced between 1-10 Visiting International resident athletes etc.).

			Number of athletes serviced							
		0	1-10	11-25	26-50	51- 100	101- 200	>200		
Visiting International	Top 20	14	1	1	0	0	0	1		
athletes - Resident	>20	8	3	0	0	1	0	0		
Visiting International	Top 20	5	1	0	4	1	2	4		
athletes – Camp Based	>20	2	0	0	2	2	2	4		
Visiting International athletes – Day Access	Top 20	3	7	2	3	1	0	1		
	>20	2	5	0	2	0	1	2		

Table 5 – Number of athletes serviced in a typical year – for Senior National level athletes – for Centers ranked in the Top 20 Olympic Ranking vs. Centers ranked in countries with a >20 Olympic Ranking.

(NOTE: The numbers in each cell represent <u>the total number of Centers</u> servicing athletes in each category. e.g. 12 Top 20 Centers serviced 0 Senior National resident athletes, 3 Top 20 ranked Centers serviced between 11-25 Visiting Senior National resident athletes etc.).

			N	umber o	f athletes	s service	ed	
		0	1-10	11-25	26-50	51- 100	101- 200	>200
Senior National	Top 20	12	0	3	0	0	1	1
athletes - Resident	>20	6	3	0	2	1	0	0
Senior National	Top 20	5	0	2	1	1	2	6
athletes - Camp Based	>20	2	0	1	1	3	1	4
Senior National	Top 20	0	2	3	1	6	0	7
athletes - Day Access	>20	1	1	0	1	3	4	2

Table 6 – Number of athletes serviced in a typical year – for Junior National level athletes – for Centers ranked in the Top 20 Olympic Ranking vs. Centers ranked in countries with a >20 Olympic Ranking.

(NOTE: The numbers in each cell represent <u>the total number of Centers</u> servicing athletes in each category. e.g. 12 Top 20 Centers serviced 0 Junior National resident athletes, 2 Top 20 ranked Centers serviced between 11-25 Visiting Junior National resident athletes etc.).

			١	Number c	of athletes	service	b	
		0	1-10	11-25	26-50	51- 100	101- 200	>200
Junior National	Top 20	12	0	2	0	2	0	1
athletes -	>20	6	0	0	1	0	3	1
Junior Top National 20 athletes – Camp >20 Based		4	0	3	2	1	2	5
	>20	2	0	0	3	0	4	3
Junior National	Top 20	1	1	2	0	8	1	4
athletes – Day Access	>20	2	0	0	1	4	1	4

Table 7 – Number of athletes serviced in a typical year – for Development level athletes – for Centers ranked in the Top 20 Olympic Ranking vs. Centers ranked in countries with a >20 Olympic Ranking.

(NOTE: The numbers in each cell represent <u>the total number of Centers</u> servicing athletes in each category. e.g. 14 Top 20 Centers serviced 0 Development level resident athletes, 1 Top 20 ranked Center serviced between 1-10 Development level resident athletes etc.).

			Number of athletes serviced						
		0	1-10	11-25	26-50	51- 100	101- 200	>200	
Development athletes -	Top 20	14	1	1	0	0	0	1	
Resident	>20	8	1	1	0	1	1	0	
Development athletes –	Top 20	6	1	2	2	2	0	4	
Camp Based	>20	2	0	1	2	1	1	5	
Development athletes –	Top 20	1	1	1	4	4	1	5	
Day Access	>20	1	0	0	4	3	2	2	

The above 4 Tables, for Centres in Top 20 ranked countries vs. >20 ranked countries suggest that;

- Despite a few exceptions there is little meaningful difference in the numbers of athletes serviced between Centres in higher vs. lower ranking countries,
- ➤ The majority of Centers service athletes on a Camp-Based or Day-Access based relationship (vs. as full time residents),
 - There was 1 significant exception where one Center from a Top 20 ranked country had over 200 Senior level international athletes as residents.
 Follow-up communication confirmed that this was linked closely to both revenue generation and fostering positive international relations.

Table 8– Number of athletes serviced in a typical year – for Visiting International level athletes – for National Training Centers vs. Regional/State/Provincial (R/S/P) Training Centers.

(NOTE: The numbers in each cell represent <u>the total number of Centers</u> servicing athletes in each category. e.g. 8 National Centers serviced 0 Visiting International resident athletes, 14 R/S/P Centers serviced 0 Visiting International resident athletes etc.).

			N	umber o	f athlete	s servic	ed	
		0	1-10	11-25	26-50	51- 100	101- 200	>200
Visiting International	National	8	3	1	0	0	0	1
athletes - Resident	R/S/P	14	1	0	0	1	0	0
Visiting International	National	0	0	0	3	2	3	4
athletes – Camp Based	R/S/P	7	1	0	3	1	1	3
Visiting International athletes – Day Access	National	2	6	1	0	0	1	3
	R/S/P	3	6	1	5	1	0	0

Table 9– Number of athletes serviced in a typical year – for Senior National level athletes – for National Training Centers vs. Regional/State/Provincial (R/S/P) Training Centers.

(NOTE: The numbers in each cell represent *the total number of Centers* servicing athletes in each category. e.g. 5 National Centers serviced 0 Senior National level resident athletes, 13 R/S/P Centers serviced 0 Senior National level resident athletes etc.).

			Number of athletes serviced							
		0	1-10	11-25	26-50	51- 100	101- 200	>200		
Senior National	National	5	2	2	1	1	1	1		
level athletes - Resident	R/S/P	13	1	1	1	0	0	0		
Senior National	National	0	0	0	1	3	2	5		
level athletes – Camp based	R/S/P	7	0	3	1	1	1	3		
Senior National	National	1	1	1	2	2	3	3		
level athletes – Day Access	R/S/P	0	2	2	0	7	1	4		

Table 10- Number of athletes serviced in a typical year – for Junior National level athletes – for National Training Centers vs. Regional/State/Provincial (R/S/P) Training Centers

(NOTE: The numbers in each cell represent <u>the total number of Centers</u> servicing athletes in each category. e.g. 4 National Centers serviced 0 Junior National level resident athletes, 13 R/S/P Centers serviced 0 Senior National level resident athletes etc.).

			N	umber o	f athlete	s service	ed	
		0	1-10	11-25	26-50	51- 100	101- 200	>200
Junior National	National	4	0	2	2	1	2	2
level athletes - Resident	R/S/P	13	0	0	1	1	1	0
Junior National	National	0	0	1	3	0	4	5
level athletes – Camp based	R/S/P	6	0	2	2	1	2	3
Junior National	National	3	0	1	0	4	1	4
level athletes – Day Access	R/S/P	0	1	1	1	8	1	4

Table 11 – Number of athletes serviced in a typical year – for Development level athletes – for National Training Centers vs. Regional/State/Provincial (R/S/P) Training Centers.

(NOTE: The numbers in each cell represent <u>the total number of Centers</u> servicing athletes in each category. e.g. 7 National Centers serviced 0 Development level resident athletes, 15 R/S/P Centers serviced 0 Development level resident athletes etc.).

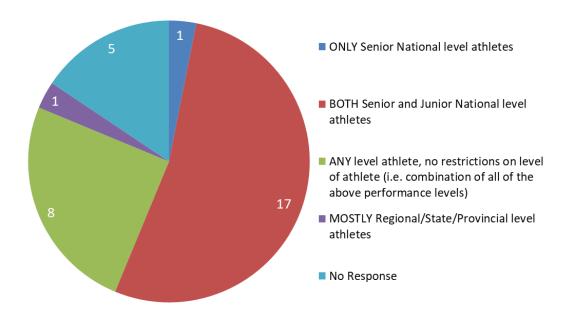
		Number of athletes serviced						
		0	1-10	11-25	26-50	51- 100	101- 200	>200
Development athletes -	National	7	2	2	0	1	0	1
Resident	R/S/P	15	0	0	0	0	1	0
Development	National	0	1	1	2	3	1	5
athletes – Camp based	R/S/P	8	0	2	2	0	0	4
Development	National	2	1	0	3	2	1	4
athletes – Day Access	R/S/P	0	0	1	5	5	2	3

In terms of observations regarding the number of athletes serviced in a typical year when Centers are compared according to National vs. R/S/P classification, there is little substantial difference between the observations made **Tables 4 - 7** for Top 20 vs. greater than 20 ranked Centers.

There is little meaningful difference in the numbers of athletes serviced between Centres designated as either National or R/S/P Centers.

Level of athletes typically serviced at Training Centers.

(i.e. Athletes that make up the majority (more than 50% of the athlete population))

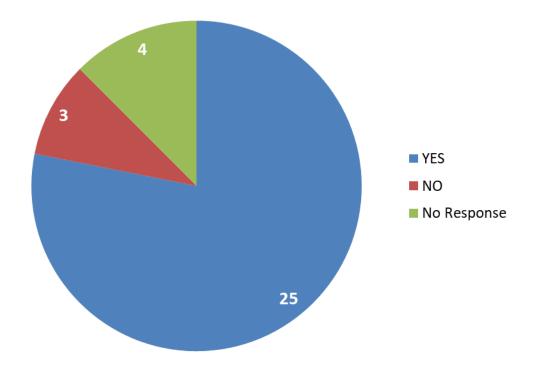


(* Numbers in each section represents the number of Centers)

Based on relatively little difference between the Center ranking and/or classification, the above chart combines all Centers together regardless of Olympic ranking and regardless of National vs. R/S/P classification.

- > The data shows that
- ➤ The majority of Centers (17 of 27 respondents 63%) service a combination of Senior and National level of athletes,
- Only 1 Center serviced ONLY Senior level athletes, and
- > 8 Centers (30% of respondents) serviced any level and category of athletes.

Service to Athletes With Disabilities (AWD)/Paralympic Athletes



(* Numbers in each sector represents the number of Centers)

- ▶ 25 of 28 Centers (89%) reported that they serviced Athletes with Disabilities.
- ➤ 3 of 28 Centers (11%) reported that they did not service Athletes with Disabilities.

Based on the overwhelming majority of Centers who do service AWD there is no apparent difference between Centers in countries with different Olympic ranking or a National vs. R/S/P classification.

Of the 3 Centers who do not service AWD,

- ➤ 1 was a National Training Center in a <20 ranked country,</p>
- ➤ 1 was a Regional/State/Provincial Center in a Top 20 ranked country and
- 1 was a Center that focused more on Research than on direct athlete servicing.

There were no follow-up questions to provide a better understand why the 3 Centers did not service AWD.

Percentage of AWD/Paralympic Athletes serviced (compared to the total athlete population serviced)

Table 12 – Percentage of AWD/Paralympic athletes services as part of total athletes serviced.

	National Centers	Regional/State/Provincial Centers	
Top 20	Average = 13%	Average = 8%	
Ranked	Range = 10% - 20%	Range = 1% - 16%	
Countries	(3 respondents)	(9 respondents)	
>20 Ranked	Average = 11%	Average = 5%	
Countries	Range = 3% - 20%	Range = 5%	
Countries	(9 respondents)	(3 respondents)	

Based on the data in **Table 12**, there does not appear to be a meaningful difference in the number of AWDs serviced between country ranking and/or Center classification.

Approximate percentage of AWD/Paralympic athletes of <u>RESIDENT</u> athlete population

Twenty-one (21) Centers responded to this Question. The majority of Centers do not have a residential program for any athletes; however, of Centers that do have residential athletes only 5 Centers reported that they included Athletes with Disabilities in the residential population.

Table 13 – Percentage of AWD/Paralympic athletes serviced as percentage of total resident athlete population.

	National Centers	Regional/State/Provincial Centers
Top 20 Ranked Countries	2 Centers - 10% of resident athletes are AWD	0 Centers had AWD resident athletes
>20 Ranked Countries	1 Center - 5% of resident athletes are AWD	1 Center – 1% of resident athletes are AWD 1 Center – 20% of resident athletes are AWD

Based on the above there does not appear to be any meaningful difference between country ranking and/or Center classification.

Wheelchair accessibility at Training Centers

Table 14 – Wheelchair accessibility in Training Centers

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Fully wheelchair accessible	11	9	10	10
Not wheelchair accessible	0	0	0	0
Partially wheelchair accessible	3	5	3	5

- > 20 of 28 Centers (71%) reported that they were FULLY wheelchair accessible.
- > 8 of 28 Centers (29%) reported that they were PARTIALLY wheelchair accessible.

No Centers reported that they were NOT wheelchair accessible at all, although several Centers did not respond to this question.

The breakdown of 'partially wheelchair accessible Centers' is as follows:

- ➤ 1 National Center, Top 20 Rank
- ➤ 1 Regional/State/Provincial Center, Top 20 Ranked
- ➤ 4 Regional/State/Provincial Center, ranked greater than 20
- 2 National Center, ranked greater than 20

Level of appropriate disability modifications of designs for AWD (e.g. modified showers, bathrooms, wider doors etc.)

Table 15 – Level of Training Center modifications and/or accommodations for AW/Paralympic athletes

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Modifications made in Training Center	13	9	10	12
No modifications made in Training Center		1	1	
Partial modifications made in Training Center	1	3	1	3

> 22 of 27 Centers (81%) have made specific modifications and/or accommodations for AWD,

> 4 of 27 Centers (15%) have made some partial modifications, and

^{➤ 1} Center of 28 (4%) have no modifications for AWD.

Public access to Training Centers

Table 16 – Level of Public Access to Training Centers

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
YES	3	10	8	5
NO	7	2	2	7
SOMETIMES	4	2	3	3

- ➤ 13 of 28 Centers (46%) are open to the public on a regular basis,
- ➤ Only 3 Centers in Top 20 ranked countries (of 14 respondents, 21%) are open to the public; whereas 10 Centers in countries ranked greater than 20 (of 14 respondents, 71%) are open to the public
- > 9 of 28 Centers (32%) are not open to the public at all, and
- ➤ 6 of 28 Centers (21%) are open to the public "sometimes" (Note: Centers in this group did not identify the amount of time they are open to the public).

How are public users charged to access your Training Center?

Of the 13 Centers that allow public access, 100% charge a fee for service to public users.

Conditions or explanation for how Public is charged

(Note: Only 12 of the 13 Centers that identified that charged for public access responded to this question)

Table 17 – Additional direct comments regarding level of access of General Public to Training Centers.

Center				
Classification	Condition/explanation			
Top 20,	The public can walk around and tour the venue but are			
National	charged a fee if they access the site to train or actively			
	experience a sport			
Top 20, R/S/P	We use public facilities (swimming pool, soccer fields, dojo)			
	and service (medical centre, school) for public and high			
	performance sport activities			
Top 20, R/S/P	We do not own our facility so other areas of the building are			
	used by the community.			
Top 20, R/S/P	During off hours, later in the day and weekends - for			
	revenue generation			
Top 20, R/S/P	Fee for service support of athletes further down the sport			
	pathway – preparing potential future scholarship athletes			
Top 20, R/S/P	General public can use sport facilities outside of elite			
	training times			
. 00 Notional	From a system on a system on size of clubs, for do notice of			
>20, National	Every customer pays for services (clubs, federations)			
>20 National	Public are charged for access, accommodation, services,			
> 20 Notional	etc.			
>20, National	Public has to pay for all services they want. Services are only free for Elite & Junior Athletes			
>20, National	Training center is a part of our Sport Institute; we have			
>20, National	common facilities that are open for public as well.			
>20, National	The Institute has a call center and each facility has its own			
ZZO, Hational	hourly charge			
>20, National	We have fixed fees for various sport disciplines			
	·			
>20, National	Some parts of the Training Centre are available but others are exclusive to HP. We are the major tenant in the facility.			
	User pays for public access			
>20, National	Training Center is open for Public from 7am to 9am and			
ZU, Hational	from 4pm to 10pm			
	пош трш то торш			
>20, R/S/P	Membership fees, fee for service for Medical Professionals			
>20, R/S/P	We have a sport sciences gym that is open to the public and			
2 - 0, 1.4 - 0, 1				
,	a relationship with a medical aid company			

Table 17 (continued) – Additional direct comments regarding level of access of General Public to Training Centers.

Center Classification	Condition/explanation
>20, R/S/P	Training center is a part of a sports institute providing education, recreational sports services, as well as high
	performance center services.

Priority access to Training Center Facilities and/or Staff between High Performance Athletes and General Public

For this question, there was no apparent difference between Centers of different Olympic ranking or different classification; therefore, all Centers were combined into one data set.

In terms of access to facilities:

➤ 22 of 24 Centers, across all categories (92%) gave priority access to facilities for High Performance athletes (vs. the general public), and only 2 Centers (8%) allowed equal access to high performance athletes and the general public.

In terms of priority access to Center staff:

➤ 21 of 22 Centers, across all categories (95%) gave priority access to staff for High Performance Athletes, and only 1 Center (5%) allowed equal access to staff between high performance athletes and the general public.

Section 2 – Capacity and Specialization

Approximate <u>DAILY</u> capacity for all areas of Training Centers (including Indoor/Outdoor Training Areas, Treatment Areas, Dining Hall/Cafeteria Facilities etc.)

Table 18 – Daily capacity of Training Centers in all areas (including indoor/outdoor training areas, treatment areas, Dining Hall/Cafeteria facilities etc.

Daily Capacity	Top 20 Olympic ranking	> 20 Olympic ranking Center		Regional/ State/ Provincial Center
Up to 50	4	1		5
Up to 100				
Up to 150	1			1
Up to 200	2	2	2	2
Up to 250	2	1	1	2
Up to 300	1	4	4	1
Over 300	4	6	6	4

The majority of Centers, 22 of 28 Centers (79%) had a capacity of at least 200 athletes on a daily basis.

Four (4) Centers from countries ranked in the Top 20 had a capacity of less than 50 athletes, however all of these Centers were categorized as R/S/P Centers.

Level of specialization in specific sports or groups of similar sports.

Table 19 - Level of specialization in specific sports or groups of similar sports.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
YES	8	9	8	9
NO	6	5	5	6

According to the data in the **Table 19**, above, there appears to be no meaningful difference between Centers of any designation in terms of specialization in specific sports or "like" groups of sports.

NOTE: The intent for this question was to determine specific specialization in different sport groups – i.e. ONLY combat sports, or ONLY endurance sports, or ONLY Winter sports etc.

We believe that the question is most likely poorly written by the survey authors and/or incorrectly interpreted by the responding Centers. As shown in **Table 20**, below, of the 17 Centers that answered YES to specializing in specific sport or specific groups of "like" sports, 12 Centers listed at least 10 sports in which they specialized, or a diverse range of sports. In most of the cases the sports in which they specialized covered most areas of potential specialization e.g. Winter sports, Summer sports, Team sports, Individual sports, Combat sports etc. In other words, they did not really "specialize" in the strictest sense of the word.

Therefore, if the answers are taken at face value, according to the different input there is a slight trend towards specialization; 17 Centers (61%) believe they specialize vs. 11 Centers (39%) who believe they do not specialize.

If the responses are adjusted according to the sports listed by the respondents answering YES to specialization, then the distribution changes and it can be argued that the majority of Centers, regardless of country ranking or classification, DO NOT specialize in any single or small group of specialized sports.

For the Centers who described themselves as "specializing", the sports "specialized" in are listed in the following question.

Areas of "specialization" of Centers who believe they specialize in specific sports or specific 'sport groups'.

Table 20 - Areas of "specialization" of Centers who believe they specialize in specific sports or specific 'sport groups'.

Center	"Specialized" Sport focus			
Category	·			
Top 20, National	Outdoor Summer Olympic Sports, Team sports			
Top 20,	Aquatic, Combat and Olympic sports **			
National	Aquatic, Combat and Olympic sports			
	(14 sports) Swimming, Gymnastics, Soccer, Judo, Equestrian,			
Top 20, R/S/P	Baseball, (Field) Hockey, Speed Skating, I Ice Hockey, Cycling,			
	Rowing, Athletics, Tennis, Golf **			
Top 20, R/S/P	All sports targeted (identified) as 'high performance' **			
	Agreements with about 10 summer sports (e.g. Cricket, Field			
Top 20, R/S/P	Hockey, Netball, Rugby League) and then individual scholarship			
10p 20, K/3/F	arrangements for athletes and coaches from sports without a			
	program agreement **			
Top 20, R/S/P	Winter Sports			
Top 20, R/S/P	Water Sports (Canoe/Kayak, Sailing)			
Top 20, R/S/P	Olympic and Paralympic Winter Sport **			
>20, National	10 sports - Athletics, Swimming, Triathlon, Judo, Fencing,			
•	Soccer, Handball, Cycling, Climbing, Hockey **			
> 20, National	Winter (3 sports), Endurance (5 sports), Swimming, Baseball **			
>20, National	(10 sports) – Athletics, Swimming, Triathlon, Judo, Fencing,			
7 = 0, 110.010.1	Soccer (Football), Handball, Cycling, Climbing, (Ice) Hockey **			
>20, National	(6 Sports) – Athletics, (Field) Hockey, Wrestling, Table Tennis,			
,,	Boxing, Judo **			
> 20, National	4 sports/areas – Triathlon, "Strength" sports, Team sports,			
	combat sports			
>20, National	All 'Nationally Targeted Sports" **			
	(40 an arts) Feathall Dumby Of Let Night all O in it			
>20, R/S/P	(10 sports) Football, Rugby, Cricket, Netball, Swimming,			
•	Triathlon, Boxing, Cycling, Athletics, Kayaking **			
>20, R/S/P	(11 sports) - Rowing, Football, Athletics, Cricket, Golf, Judo,			
-	Rugby, Archery, (Field) Hockey, Swimming, Netball **			
>20, R/S/P	Winter (Alpine) Sports			

^{** 12} respondents may have mis-understood the question and do not really specialize.

Categories of athletes serviced at Training Centers

Table 21 - Categories of athlete/sport groups serviced at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Only Summer Olympic Sports		2	1	1
Only Winter Olympic Sports				
Both Summer and Winter Olympic Sports ONLY	2			2
Only Summer Paralympic Sports				
Only Winter Paralympic Sports				
Both Summer and Winter Paralympic Sports ONLY				
Both Summer and Winter Olympic and Paralympic Sports	5			5
All categories of sports (i.e. Summer, Winter, Olympic, Paralympic, Non-Olympic, non- Paralympic, Others	7	12	12	7

The majority of Centers (19 of 28 Centers, 68%), regardless of ranking or category reported servicing all categories of athletes and/or sports.

- > 2 Centers (of 28, 7%) serviced ONLY Summer Olympic athletes
 - o Both of these Centers were in countries outside the Top 20 -
 - 1 a >20, National level Center,
 - 1 a >20, R/S/P level Center.

Section 3 - Services and Capabilities

Sports Medicine and other medical/health related services provided at Training Centers

Note the data for this question is organized into 2 separate Tables. **Table 22** shows the data classified by Olympic ranking. **Table 23** categorizes the data by National vs. Regional/State/Provincial (R/S/P) designation.

Table 22 – Sports Medicine related responses sorted by Olympic Ranking.

	Ranking/ Category	Do Not Provide On-Site	Full Time On - Site	Part Time On- Site	OUT- SOURCED (AND PAID FOR BY FACILITY AND/OR GOV'T OR PRIVATE MEDICAL INSURANCE	OUT- SOURCED (BUT NOT PAID FOR BY FACILITY OR MEDICAL INSURANCE)		
	(Numbers in cells below represent total number of Centers providing the respective service <i>it is not a measure of the total number of staff</i>							
	employed)							
Sports Medicine Doctor/Sports	Top 20 ranked	0	10	4	5	1		
Medicine specialist	> 20 th Rank	2	4	3	3	1		
General Practice Doctor	Top 20 ranked	1	3	7	4	2		
	> 20 th Rank	4	2	3	3	3		
Nurse/Nurse Practitioner	Top 20 ranked	6	5	0	3	2		
	> 20 th Rank	5	3	0	0	3		
Dentistry/Dental Services	Top 20 ranked	8	0	1	4	4		
	> 20 th Rank	7	0	0	2	3		
Eye/Optometry Services	Top 20 ranked	6	0	1	6	5		
	> 20 th Rank	7	0	0	2	3		

Table 22 (continued) – Sports Medicine related responses sorted by Olympic Ranking.

	Ranking/ Category	Do Not Provide On-Site	Full Time On - Site	Part Time On- Site	OUT- SOURCED (AND PAID FOR BY FACILITY AND/OR GOV'T OR PRIVATE MEDICAL INSURANCE	OUT- SOURCED (BUT NOT PAID FOR BY FACILITY OR MEDICAL INSURANCE)	
	(Numbers in cells below represent total number of Centers providing the respective service it is not a measure of the total number of staff employed)						
Chiropractic Services	Top 20 ranked	4	2	3	3	3	
	> 20 th Rank	6	1	0	2	3	
Osteopathy	Top 20 ranked	7	2	3	5	4	
	> 20 th Rank	8	1	1	1	3	
Naturopathy	Top 20 ranked	7	0	1	4	2	
	> 20 th Rank	8	0	0	0	3	
X-Ray	Top 20 ranked	4	1	0	9	2	
	> 20 th Rank	6	0	1	3	2	
	_						
MRI/Other similar imaging services	Top 20 ranked	6	0	0	7	2	
	> 20 th Rank	6	0	1	3	2	
Physiotherapy/ Athletic Training	Top 20 ranked	0	10	5	5	0	
	> 20 th Rank	0	10	2	1	0	
Massage Therapy	Top 20 ranked	0	7	7	6	0	
	> 20 th Rank	0	9	2	1	0	

Note that since not all Centers answered this question and some Centers did not answer for all Sports Medicine specialist categories, the data in each cell are not equal for Centers in all categories and/or for all specialty choices. This is also the case for the **Table 23** below.

It is relatively well accepted that the "traditional" or core Sports Medicine staff include:

- > A Sports Medicine Physician (or another related specialist medical doctor),
- > A Physiotherapist or Athletic Trainer and,
- ➤ A Massage Therapist.

This belief is supported by the data shown above in the sense that all responding Centers, regardless of Olympic ranking at least a Full Time or Part Time staff member was employed in each of these 3 disciplines; with the exception of 2 Centers ranked greater than 20th that did not provide a Sports Medicine specialist on site.

Other observations that can be made from the above data include:

- ➤ In respect of core staff (either paid, under contract or accessible by athletes through respective Centers), there was no meaningful difference between Centers with different Olympic ranking.
- ➤ 10 Top 20 ranked Centers (36% of responding Centers) employed a Full Time Sports Medicine specialist, whereas only 3 Centers (14%) ranked outside the Top 20 employed a Full Time Sports Medicine specialist.
- > Employment of other "non-core" medical staff varies between Centers.
 - 8 Centers in Top 20 ranked countries (29%) either employed or had paid access to Chiropractic specialists vs. only 3 Centers from countries ranked greater than 20 (11%).
 - No Centers had MRI services full time on site: however, 9 Centers (25% of respondents) had paid access to MRI service vs. only 4 Centers (14% of respondents) in countries outside the Top 20 ranking that had paid access to MRI services.
 - Similarly, 10 Top 20 Centers (36% of respondents) had paid access to X-Ray services vs. only 4 Centers (14%) in countries ranked outside the Top 20 Olympic ranking.
 - The majority of Centers, regardless of Olympic ranking, had little or no access to either Osteopathy and/or Naturopathy; however, there were some exceptions to this.

Interpretation of the above data should be made with caution in the sense that access to, or restriction to certain specialists may sometimes be a function of the presence and/or prevalence of those specialties and/or professional licensing requirements in respective countries and/or regions. It may not necessarily reflect a strategic decision by Centers to provide or restrict athlete access to certain specialties.

Table 23 – Sports Medicine responses sorted by Center Designation.

	Ranking/ Category	Do Not Provid e On- Site	Full Time On - Site	Part Time On- Site	OUT- SOURCED (AND PAID FOR BY FACILITY AND/OR GOV'T OR PRIVATE MEDICAL INSURANCE	OUT- SOURCED (BUT NOT PAID FOR BY FACILITY OR MEDICAL INSURANCE)	
	(Numbers in cells below represent total number of Centers responding it is not a measure of the total number of staff employed)						
Sports	National National	2	8	2	1	1 1	
Medicine Doctor/Sports Medicine specialist	Reg'l/State/ Prov'l	1	6	5	7	1	
General	National	1	3	5	3	1	
Practice Doctor	Reg'l/State/ Prov'l	4	2	4	4	2	
Nurse/Nurse	National	3	7	0	0	3	
Practitioner	Reg'l/State/ Prov'l	8	1	0	3	2	
Dentistry/ Dental	National	7	0	1	1	4	
Services	Reg'l/State/ Prov'l	8	0	0	5	3	
Eye/Optometry	National	7	0	1	1	4	
Services	Reg'l/State/ Prov'l	6	0	0	7	4	
Chinamasatia	Nietienel						
Chiropractic Services	National	6	3	1	0	3	
23.7.000	Reg'l/State/ Prov'l	4	0	2	5	3	
Osteopathy	National	6	3	1		3	
	Reg'l/State/ Prov'l	4	0	3	5	3	
No. 41	NI-C 1			,			
Naturopathy	National	7	0	1	1	3	
	Reg'l/State/ Prov'l	8	0	0	3	2	
X-Ray	National	5	1	1	3	3	
	Reg'l/State/ Prov'l	5	0	0	8	1	

Table 23 (continued) – Sports Medicine responses sorted by Center Designation.

	Ranking/ Category	Do Not Provide On-Site	Full Time On - Site	Part Time On- Site	OUT- SOURCED (AND PAID FOR BY FACILITY AND/OR GOV'T OR PRIVATE MEDICAL INSURANCE	OUT- SOURCED (BUT NOT PAID FOR BY FACILITY OR MEDICAL INSURANCE)	
	(Numbers in cells below represent total number of Centers responding it is not a measure of the total number of staff employed)						
MRI/Other	National	6	0	1	2	2	
similar imaging services	Reg'l/State/ Prov'l	6	0	0	9	2	
Physiotherapy/	National	0	12	1	0	0	
Athletic Training	Reg'l/State/ Prov'l	0	12	6	6	0	
Massage	National	0	10	2	1	0	
Therapy	Reg'l/State/ Prov'l	0	6	7	6	0	

It would appear that based on the above responses National Centers are slightly better staffed in the "core" Sports Medicine areas than R/S/P Centers. National Centers appear to have more Full-time and Part-Time core staff than their counterparts; however, in order to compensate it seems that R/S/P Centers have arranged for appropriate off-site paid access to core expertise.

It is unclear whether this is a budgetary-based situation or a philosophical/strategic decision.

Note that some Centers provided other related Sports Medicine services, not included in the original survey list as follows:

Table 24 – Additional service providers not listed in Table 23.

Training Center Category	Service					
Top 20, National	Orthopedic medical services and trauma center on-site					
>20, National	Full Clinical laboratory					
>20, National	Social Worker					
> 20 R/S/P	Cryotherapy Unit					
>20, R/S/P	"Recovery Unit"					

Sport Sciences services and related services provided at Training Centers.

Note: the data for this question is organized into 2 separate Tables. **Table 25** shows the data classified by Olympic ranking. **Table 26** categorizes the data by National vs. R/S/P designation.

Table 25 – Responses sorted by Olympic Ranking.

	Ranking/ Category	Do Not Provide On-Site	Full Time On - Site	Part Time On- Site	OUT- SOURCED (AND PAID FOR BY FACILITY AND/OR GOV'T OR PRIVATE MEDICAL INSURANCE	OUT- SOURCED (BUT NOT PAID FOR BY FACILITY OR MEDICAL INSURANCE)
					umber of Center <i>Imber of staff e</i>	
Sport or Exercise	Top 20 ranked	0	13	3	0	0
Physiology	> 20 th Rank	0	11	1	1	1
Sport Psychology/	Top 20 ranked	2	7	3	2	0
Mental Training	> 20 th Rank	0	7	6	2	2
Biomechanics	Top 20 ranked	1	8	3	2	0
Biomediames	> 20 th Rank	2	8	3	0	1
Video/ Performance	Top 20 ranked	0	11	3	1	0
Analysis	> 20 th Rank	2	10	2	0	0
Sport Engineering	Top 20 ranked	4	2	5	2	0
Opon Engineering	> 20 th Rank	5	3	3	0	2
		_				

Table 25 (continued) – Responses sorted by Olympic Ranking.

	Ranking/ Category	Do Not Provide On-Site	Full Time On - Site	Part Time On- Site	OUT- SOURCED (AND PAID FOR BY FACILITY AND/OR GOV'T OR PRIVATE MEDICAL INSURANCE	OUT- SOURCED (BUT NOT PAID FOR BY FACILITY OR MEDICAL INSURANCE)
	it is n				umber of Center Imber of staff e	
Sport Nutrition/	Top 20 ranked	2	7	3	2	0
Dietitian	> 20 th Rank	1	9	3	0	1
Strength &	Top 20 ranked	0	13		1`	0
Conditioning	> 20 th Rank	0	12	1	0	0
Motor Learning/ Skill Acquisition	Top 20 ranked	4	5	3	3	0
Services	> 20 th Rank	3	6	3	0	0
Integrated Recovery	Top 20 ranked	1	6	5	2	0
Specialists	> 20 th Rank	2	7	1	0	2
Biochemists/In house laboratory	Top 20 ranked	5	4	2	3	0
analysis	> 20 th Rank	6	4	2	1	2

Note that since not all Centers answered this question and some Centers did not answer for all Sports Medicine specialist categories, the numbers are not equal for Centers in all categories for all access choices. This is also the case for the **Table 26** below.

It is relatively well accepted that the "core" Sport Sciences" disciplines include:

- Sport Physiology
- Sport Psychology/Mental Training
- Biomechanics
- > Strength & Conditioning
- Nutrition
- Video/Performance Analysis
 - (Note that in some cases Video/Performance Analysis is a part of the training and/or responsibility of Biomechanics)

This belief appears to be supported by the data:

- All Centers report either Full Time or Part Time Sport Physiologists and/or paid offsite access to Sport Physiology services,
- > All Centers report either Full Time or Part Time Strength & Conditioning specialists and/or paid off-site access to Strength & Conditioning services,
- ➤ All but 2 Top 20 Centers, and 1 Center not ranked in the Top 20, reported access to Sport Psychology/Mental Training Services (but they both provided paid outsourced/off-site Sport Psychology services)
- All but 1 Top 20 Centers and 2 Centers not ranked in the Top 20 reported access to Biomechanics Services
- All but 1 Top 20 Centers and 2 Centers not ranked in the Top 20 reported access to Nutrition related Services
- 2 Centers not ranked in the Top 20 did not provide Video/Performance Analysis Services

The area of Integrated Recovery is still a relatively new area of service provision in the realm of high performance sport. Despite its relative short history as a "specialist discipline", the majority of Centers provided this service regardless of Olympic ranking:

- Only 1 Top 20 ranked Center and 2 Centers not ranked in the Top 20 reported that they did not provide this service.
- ➤ 13 of 13 Centers (100%) ranked in the Top 20 Olympic countries provided Recovery Specialists through either on-site staff or paid off-site access, and
- ➤ 8 of 12 (67%) Centers from countries ranked outside the Top 20 provided access to Integrated Recovery specialists
 - In other words, 21 of 25 Centers (84%) provide access to Recovery Specialists

Table 26 – Responses sorted by Center Designation.

	Ranking/ Category	Do Not Provide On-Site	Full Time On - Site	Part Time On- Site	OUT- SOURCED (AND PAID FOR BY FACILITY AND/OR GOV'T OR PRIVATE MEDICAL INSURANCE	OUT- SOURCED (BUT NOT PAID FOR BY FACILITY OR MEDICAL INSURANCE)
					mber of Centers Inber of staff em	responding it
	National	0	12	0	0	1
Sport or Exercise Physiology	Reg'l/State/ Prov'l	0	12	4	1	0
	National	1	6	5	0	2
Sport Psychology/ Mental Training	Reg'l/State/ Prov'l1	1	8	4	4	0
	National	2	9	1	0	1
Biomechanics	Reg'l/State/ Prov'l	1	7	5	2	ı
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	.		4.0	•		
Video/ Performance Analysis	National Reg'l/State/ Prov'l	1	10 11	3	0 1	0
- manyere	1.011					
	National	4	4	2	0	2
Sport Engineering	Reg'l/State/ Prov'l	5	1	6	2	0
	National	2	8	2	0	1
Sport Nutrition/ Dietitian	Reg'l/State/ Prov'l	1	8	4	2	0
	Niedicosi		40		0	
Strength & Conditioning	National Reg'l/State/ Prov'l	0	10 15	0	0	0
Motor Learning/	National	3	5	3	1	0
Skill Acquisition Services	Reg'l/State/ Prov'l	4	6	3	2	0
Integrated	National	1	6	2	0	2
Recovery Specialists	Reg'l/State/ Prov'l	2	7	4	2	0
		·				
Biochemists/In house laboratory	National Reg'l/State/	4	5	1	1	2
analysis	Prov'l	7	3	3	3	0

The results for this area categorized by National vs. R/S/P Training Centers seems to be virtually the same as for the categorization by Olympic ranking.

Virtually all Centers, regardless of designation, provide Full-time, Part-time or paid access to "core" Sport Sciences staff, with only a few exceptions.

Only 2 Centers (both Regional/State/Provincial level Centers) did not provide on-site Recovery specialists.

As with the Olympic ranking data in **Table 25** above, the areas of Sport Engineering, Motor Skill Learning and Biochemistry are less available than other areas of service. However, in these areas, the trend seems to be that they are more available in National vs. R/S/P Centers.

Table 27 - Other areas related to Sport Sciences not listed in the original survey.

Training Center Category	Service
Top 20, R/S/P	Talent identification and long-term performance build-up
	sport scientific information services as part of knowledge
	management in junior and senior elite sport.
Top 20, R/S/P	Innovation Sport labs for Swimming, Gymnastics, Field
	Hockey, Soccer, Cycling attached to the sport programs.
>20, National	Partnership with Research Center of Olympic Sports
>20, National	Sports Anthropometry
>20, National	High altitude Simulation chamber, tribometer and cold
	environmental chamber. (Facilities on site but do not
	belong to Training Center)

<u>Section 4 – Athlete and/or Coach Career/Education/Life</u> <u>Management Services (Dual Career)</u>

Services provided in the area of Athlete and/Coach Career/Education/Life
Management

Table 28 - Athlete and/or Coach Career/Education/Life Management Services.

Center Category	Full time specialists (in this area)	(Athlete) Retiremen Career Transition Counseling Career Mgmt.	t/ Education, School	ol / Internsh	nip Mgmt	Development resources/				
	Numbers in cells below represent the number of Centres identifying support in the respective area. Centres could select more than 1 option.									
Top 20 Olympic ranking	12	10	5	6	9	11				
> 20 Olympic ranking	8	6	10	3	11	9				
National Training Center	8	6	9	4	12	8				
Regional / State/ Prov'l Center	12	10	6	5	13	12				

The above data suggest that all the service options listed were provided regardless of Olympic ranking or National vs. R/S/P status. No single service stood out as being the most popular service. The least often provided service for all Center classification was "Employment/Internship Placement Services".

Section 5 – Facilities and Food Services

Athlete Dormitories or Residence Capacity

Table 29 - Availability of Athlete Dormitories/Residences.

Center category	YES	NO	NO, but we have an agreement for residences/accommodation with an external/off site/3rd party facility (e.g. short term and/or long term stay hotels)				
			represent the number of Centres identifying support in area. Centres could select more than 1 option				
Top 20 Olympic ranking	5	7	2				
> 20 Olympic ranking	10	1	3				
National Training Center	11	0	2				
Regional/ State/ Provincial Center	4	8	3				

- ➤ Overall, the majority of Training Centers (20 of 28 Centers 71%) provide dormitories/residents (or an appropriate residence facility)
- ➤ 13 Centers (46%) ranked outside the Top 20 provided dormitories or access to residential services vs. only 10 Centers (36%) from Top 20 ranked countries
- ➤ Conversely, 14 National level Centers (50%) provided dormitories or access to residential facilities vs. only 7R/S/P Centers (25%).

Type of Residence facility, and room capacity

Table 30 - Type of residential rooms and capacity.

	Single Bed Rooms				Multiple Bed Rooms			Family -Style Accommodation			
		Numbers in cells below represent the number of Centres identifying support in the respective area. NOT the total number of rooms available.									
	1 – 100 beds	100 – 200 beds	>200 beds		1 – 100 beds	100 – 200 beds	>200 beds		1 – 100 beds	100 – 200 beds	>200 beds
Top 20 Olympic ranking	4	1	-		1	3	-		1	-	-
> 20 Olympic ranking	9	-	1		1	4	5		3	4	-
National Training Center	8	1	1		1	4	4		2	3	-
Regional/ State/ Provincial Center	5	-	-		1	3	1		2	1	-

In addition to the above data, 7 Centers had single and multiple-bed rooms but no family style accommodation.

Altitude Simulation Capacity in Athlete Residences

The data in the cells in the following Table refer to the number of Training Centers with specific altitude related facilities – not the number of rooms.

Table 31 - Training Center with altitude simulation capacity in athlete residences.

	Center at natural altitude (at least approx. 3000' / 1000m)	Fully automated altitude rooms	Only Altitude Tents (not full altitude rooms)	No altitude capacity
Top 20 Olympic ranking	1	3	2	5
> 20 Olympic ranking	3	1	2	7
National Training Center	3	3	2	4
Regional/ State/ Provincial Center	1	1	2	7

Centers were also asked to list the total number of altitude capable rooms (or tents). The responses for the Centers that answered were as follows (each response represents a separate Training Center). Only 7 Centers (25%) responded to this question.

Table 32 - Nature of altitude simulation in responding Training Centers.

Top 20 ranking, National Centers	> 20 th ranking National Centers	Top 20 Ranking, R/S/P Center		
4 Suites2 Tents1 Room	1 altitude lab1 Room	> 10 Tents > 7 Rooms		

Type of Summer/Outdoor Sport Facilities for Prioritized Use.

Table 33 – Summer/Outdoor Sport Facilities at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Indoor or covered 50m swimming Pool(s)	11	6	8	9
Outdoor 50m Swimming Pool(s)	5	5	5	5
Indoor or covered Swimming Pool(s) – less than 50m	8	9	7	10
Outdoor Swimming Pool(s) – less than 50m	4	5	4	5
Diving Pool(s) – 1m AND 3m AND High Tower Boards	9	4	4	9
Diving Pool(s) – 1m AND 3m Boards	1	2	2	1
Diving Pool(s) 1m and 3m ONLY	1	2	2	3
Diving Pool(s) 1m Board ONLY	1	1	2	
Outdoor 400m Running Track	12	11	10	13
Outdoor Running Track – other distance than 400m	4	6	6	4
Indoor 400m Running Track	1	2	3	
Indoor Running Track – other distance than 400m	4	3	2	5
Multi-purpose indoor courts e.g. Basketball, Volleyball, Handball (or other sports)	13	11	10	14
Racquetball Court(s)	2	1	2	1
Squash Court(s)	2	7	4	5
Indoor Tennis Court(s)	2	9	4	2
Outdoor Tennis Court(s) – Any surface	5	11	9	7

Table 33 (continued) – Summer/Outdoor Sport Facilities at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Multi Combat Sport Training Area(s) (e.g. Taekwondo, Judo, Karate, Wrestling etc.)	10	10	10	10
Taekwondo SPECIFIC Training Area	2	3	5	
Wrestling SPECIFIC Training Area	4	5	6	3
Judo SPECIFIC Training Area	6	7	7	6
Karate SPECIFIC Training Area	1	2	4	
Outdoor Multi-Use Grass Fields	12	11	11	7
Outdoor Multi-Use Artificial Surface Field(s)	10	19	9	10
Indoor Cycling Velodrome	4	1	1	4
Outdoor Cycling Velodrome	8	2	2	8

It appears that there are some consistencies for facilities across all Centers regardless of Olympic ranking or National vs. R/S/P Center. The consistent facilities could be considered the "core" facilities.

Of 28 responding Centers (i.e. combining all Centers regardless of Olympic ranking or designation)

- All 28 Centers had multi-use indoor gymnasium
- > 28 of 28 Centers (100%) had an indoor or outdoor pools of varied distances
- ➤ 28 Centers (100%) had an Athletics 400m track or an indoor track (of varied distance)
- ▶ 23 of 28 Centers (82%) had outdoor multi-sport grass fields

After these 4 core facilities there was wider variation of the number and type of sport facilities at different Centers. This is likely due to the sports in which the Center may specialize, or other localized reasons.

Additional facilities, not listed in the original survey question, are listed below - (not sorted by Ranking or type of Center). It is possible that the facilities listed below are custom built for specialized servicing.

Table 34 - Other facilities reported by Training Centers for Summer/Outdoor Sports.

Sport Facility	Number of Centers
BMX Cycling	1
Mountain Bike	2
Orienteering	2
Archery	1
Beach Volleyball specific	2
Golf	1
Rowing	4
Indoor Football	3
Gymnastics	3
Ten Pin Bowling	1
Weightlifting	2
Indoor Throwing (Athletics)	1
Climbing	2
Trampoline	1
Dance	1

Type of Winter/Indoor Sport Facilities for Prioritized Use.

Table 35 - Winter/Indoor Sport Facilities at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Indoor Ice Hockey	2	4	3	3
Outdoor Ice Hockey	1			1
Indoor Figure Skating	3	4	3	4
Outdoor Figure Skating	1			1
Indoor Short Track Speed Skating	4	1	1	4
Outdoor Short Track Speed Skating	1			1
Indoor Long Track Speed Skating	2			2
Outdoor Long Track Speed Skating				
Bobsled/Luge/Skeleton Track	1	1		2
Cross Country Skiing Facility	2	5	4	3
Biathlon Facility	1	3	2	2
Curling Facility	1	3	2	2
Alpine Ski facilities (e.g. Downhill, Ski- Cross, Snowboard Cross, Slalom etc.)	3	4	3	4
Half-pipe	2	4	2	4

Based on the data in the above **Table 35** there does not seem to be a consistent set of "core" winter sport facilities. It is likely that winter sport facilities are custom built for specialized servicing, or potentially legacy facilities left over from a major winter sport competition.

Additional facilities, not listed in the original survey question, are listed below - (not sorted by Ranking or type of Center). Again, it is likely that the facilities listed below are custom built for specialized servicing, or perhaps legacy facilities left over from a major winter sport competition.

Table 36 - Other facilities reported by Training Centers for Winter/Indoor Sports.

Sport Facility	Number of Centers
Aerial/Acrobatic Ski Facility	1
Ski Water Jump	1
Outdoor 45 Km Skating Track	1
Ski Jump	4
Ski Orienteering	1
Indoor Ski Tunnel	1
Indoor Half Pipe	1

Availability of Specialized Strength Training/Weightlifting facilities at Training Centers

Twenty-eight (28) Centers responded to this question. All 28 Centers (100%) had specific weight-training area(s).

Approximate capacity of all Strength/Weight Training Areas combined.

(Capacity means how many athletes can be comfortably/effectively/safely training at the same time)

Table 37 - Training Capacity of Strength/Weight Training Facilities at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Comfortably up to 25 persons	4	5	4	5
Comfortably up to 50 persons	7	3	4	6
Comfortably up to 100 persons	1	3	4	
Comfortably more than 100 persons	2	5	1	4

Based on the above data it seems that there is no connection between Olympic ranking and/or Center designation and capacity of Strength/Weight Training areas.

How Strength/Weight Training Areas are Staffed or Supervised.

Table 38- Staffing/Supervision at Strength/Weight Training Facilities at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Full Time Strength Training Specialists at all times	10	6	4	12
Part Time Strength Training Specialists (on duty when teams request)	3	5	5	3
No Trained staff provided				
Athletes/Teams must provide their own staff – either trained S&C specialists or their coach(es)	1	3	4	-

- ➤ No Centers of any ranking or designation had un-supervised Strength/Weight Training areas.
- ▶ 16 of 28 Centers (57%) had Full-time, Trained Strength Training Specialists.
- > 8 of 28 Centers (29%) had at least Part-Time Strength Training specialists.
- > Only 4 of 28 Centers (14%) did not provide specialist staff but required sports to provide their own (trained) staff.

Availability of Specialized Recovery Centers at Training Centers

Table 39 – Availability of Specialized Recovery Centers at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
YES	12	14	13	13
NO	2			2

As previously seen, Recovery has become an important service area. 26 of 28 Centers (93%) have specialist Recovery Centers.

Type of Recovery Facilities/Services Provided at Specialized Recovery Centers

Table 40 - Type of Facilities/Services provided at Specialized Recovery Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Hydrotherapy/Water Based Therapy	10	9	9	10
Massage	9	14	12	11
Physiotherapy	11	14	13	12
Hyperbaric Chamber	1			1
Pneumatic (Pressure) Compression Devices/equipment	3	1	1	3
Cryotherapy Unit	5	3	5	3
Sauna	5	10	11	4
Steam Room	4	4	5	3
Meditation/Quiet Room	3	2	2	3

Table 41 - Other Facilities (not sorted by Ranking or type of Center).

Center Category	Recovery Facility/Service
>20, National	Alter G Treadmill
>20, R/S/P	Infra Red Chambers
Top 20, R/S/P	Large Ice bath
Top 20 National	Functional Rehabilitation Room

Based on the data above there appears to be 4 consistently provided services or facilities. This could be considered "core" facilities provided in Recovery Centers.

- ➤ Hydrotherapy/Water based capabilities (18 of 26 Centers 69%),
- Massage (23 of 26 Centers 88%)
- > Physiotherapy (25 of 26 Centers 96%), and
- ➤ Sauna/Steam Rooms (23 of 26 Centers 88%)

Type and Capacity of Meeting Rooms at Training Centers

Table 42 - Type and Capacity of Meeting Rooms at Training Centers.

	No specific Meeting Conf. or Video Rooms	Multi Use Conference, Video, Meeting Rooms		cific ting Conference, Video, Conference, Video, Meeting Rooms Specific Video Replay rooms		Specific Classrooms				
		Up to 25	Up to 50	Up to 100	Up to 25	Up to 50	Up to 100	Up to 25	Up to 50	Up to 100
Top 20 Olympic ranking	-	3	1	10	9	1	-	6	3	3
> 20 Olympic ranking	1	1	2	11	5	3	3	5	5	4
National Training Center	-	-	3	10	5	3	3	5	5	3
Regional/ State/ Provincial Center	-	5	3	7	9	1	-	6	3	4

All Centers had some type of Meeting, Teaching and/or Video rooms of variable capacity; however, based on the above data it seems that there is no connection between Olympic ranking and/or Center designation and capacity of meeting rooms.

Other observations include:

- > 4 Top 20 ranked Training Centers had no Video specific rooms
- > 3 Training Centers ranked below Top 20 had no Video specific rooms
- 2 National Training Centers had no Video specific rooms
- > 5 R/S/P Training Centers had no Video specific rooms

Availability of Separate Internet Connected Work Stations for Athletes and/or Coaches at Training Centers

Table 43 - Availability of Internet Connected Workstations at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
YES	11 Centers Range = 1 - 12 Stations Average = 9 Stations	8 Centers Range = 5 - 25 Stations Average = 3.5 Stations (Only 2 Centers reported number of	7 Centers Range = 25 Average = 25 (Only 1 Center reported number of stations)	12 Centers Range = 1 – 12 Stations Average = 7 Stations
NO	2	stations) 7	6	3

> 19 of 28 Centers (68%) have separate, dedicated Internet connected workstations for Athletes and/or Coaches

⁹ of 28 Centers (32%) do not provide specialized workstations for Athletes and/or Coaches

Level of Wireless Internet Access at Training Centers

Table 44 - Level of Wireless Internet Access at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
100% wireless Internet Coverage at the Center	11	9	8	12
Wireless Internet coverage in some parts of the Training Center	3	5	5	3
No Wireless Access in Training Center	0	0	0	0

- > All Training Centers reported some level of Internet access in the Training Center.
- ➤ 20 of 28 Centers (71%) have 100% Internet coverage in their Training Centers.

Child Care services provided by, or at Training Centers

Table 45 - Child Care services provided by, or at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
YES	2	6	5	3
NO	12	8	8	12

The majority of Training Centers (20 of 28 Centers – 71%) across all ranking and/or designation DO NOT provide Day Care/Child Care service for athletes' children/families.

Responsible Party for Payment for Child Care Services at Training Centers

Table 46 – Responsible party for payment for Child Care Services at Training Centers (if provided, or accessible).

	Top 20 Olympic Ranking	> 20 Olympic Ranking	National Training Center	Regional/ State/ Provincial Center
Our Training Center pays for it	1	5	4	2
Users pay for it	1	1	1	1
Shared cost (between Training Centers and Users)				
Paid for by an external source (e.g. Government subsidy, sponsor, other)				

- > 8 Centers provide childcare services, or provide access to Child Care services
- > 6 Centers cover the costs themselves
- > 2 Centers the User covers the costs

On-site Food Services at Training Centers

Table 47 – Level of On-Site Food Services at Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
No Food Service at all	5	1	1	5
Full Food services for athletes only (Full food services means Breakfast, Lunch and Dinner)	1	1	2	-
Full Food services for resident and non-resident athletes only (Full food services means Breakfast, Lunch and Dinner)	4	9	9	4
Some minimal food available on Site	4	3	1	6
Snack Machines on site – only for FOOD	-	-		
Snack Machines on site – only for DRINK	-	1	1	
Food and Drink machines on site	1	4	3	2

- > 6 Centers (of 28, 21%) provided no food services at all
- > 5 Centers in Top 20 ranked countries provided no food services at all
- ➤ 15 Centers (of 28, 54%) provided "full food service"
- ➤ 6 Centers (of 28, 21%) provided some form of food and/or drink (vending) machines.

Party responsible for cost of Food Services

Table 48 – Party responsible for Cost of Food Services.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Free for athletes only	2	3	3	2
Free to Athletes AND Coaches (or their Sport Federation)	3	-	2	1
Small coast to Athletes and/or Coaches (or their Sport Federation	3	3	4	2
Full cost to Athletes and/or Coaches (or their sport Federation)	-	7	3	4

- > 7 Centers (of 21 respondents, 33%) provide food services to athletes and/or coaches free of charge
- > 14 Centers (of 21 respondents, 66%) charge some level of fee for food services
 - o 6 Centers (29%) charge a small fee
 - 8 Centers (39%) charge Athletes and/or Coaches full cost for on-site food services.

(Note: 22 Centers provided some level of food service on site; however only 21 Centers reported the costs associated with this service).

Level of input into Menu Choices at Training Centers – By Specialist Sport Dietitian or Related Specialist.

Table 49 - Level of input into Menu Choices at Training Centers – by specialist Sport Dietitian or related specialist.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Yes	8	8	9	7
No	1	2	1	2
Sometimes	-	3	2	1

(Note: 22 Centers responded to this question)

- ➤ 16 of 22 Centers (73%) have menus designed/managed by a Sports Nutritionist or Dietician
- > 3 of 22 Centers (14 %) have no relevant professional input into food menus for athletes

Other comments (if the Center answered 'SOMETIMES')

- > There is cooperation between food provider and Nutritionist
- > Professional nutrition staff sometimes consulted for special events only
- Menu design done by a combination of staff (including Nutritionists)
- ➤ Basic menu plan designed by Nutritionist but sometimes modified by cafeteria staff to improve athlete acceptance.

Section 6 - Staff Capacity

Skill Set and Number of Sport Services Staff Employed (or Available to Access at Training Centers

(NOTE: If a staff person, or consultant who provides service at a Training Center, for either Athletes and/or Coaches, had more than one skill and provided services in BOTH of those areas, they were counted as 2 separate service areas.... e.g. a person who is trained in both Sport Physiology and Strength/Conditioning AND provides services in both those areas was counted as 2 people or 2 skill sets).

The numbers in the cells in **Table 50** below show the average for each category and the range between highest and lowest staff numbers.

Note that for the purpose of calculating average staff sizes the choice of >10 was counted as 10. Therefore, for the Centers that have >10 in their range the average is most likely slightly higher than the figure shown in the respective cell.

Table 50 - Type and number of Sport Services staff at Training Centers.

	Top 20 Olympic ranking Average (Range)	> 20 Olympic ranking Average (Range)	National Training Center Average (Range)	Regional/ State/ Provincial Center Average (Range)
Sports Medicine Doctor	3.3 (1 - 6)	2.6 (0 - 6)	2.5 (0 - 6)	3.1 (1 – 6)
Nurse	0.5(0-4)	0.7(0-2)	0.9(0-4)	0.4(0-2)
Physiotherapist/ Athletic Trainer	5.1 (0 - >10)	4.3 (1 – 9)	4.2 (1 – 9)	5.1 (0 - >10)
Massage Therapist/Soft Tissue Therapist	4.0 (0 -> 10)	3.5 (1 - >10)	3.5 (1 - >10)	3.9 (0 ->10)
Chiropractor	1.8 (0 ->10)	0.1 (0 – 2)	0.8(0-6)	0.5(0-2)
Other Allied Health Professionals not listed above	1.6 (0 – .10)	0.4 (0 – 2)	0.6 (0 – 5)	1.2 (0 - >10)
Sport/Exercise Physiologists	2.9 (1 - >10)	2.9 (0 – 8)	2.8 (0 – 8)	2.9 (1 - >10)
Sport Psychologists/Mental Trainers	2.6 (0 - >10)	2.2 (0 – 8)	2.2. (0 – 8)	2.6 (0 - >10)
Biomechanists	1.5 (0 – 5)	1.6 (0 – 7)	1.8 (0 – 7)	1.4 (0 – 5)
Video Performance Analysts	1.7 (0 – 5)	1.4 (0 – 5)	1.5 (0 -5)	1.6 (0 – 5)
Strength and Conditioning Specialists	4.4 (0 - >10)	5.5 (1 - >10)	4.5 (0 - >10)	5.3 (3 - >10)
Motor Skill acquisition specialists	0.9 (0 – 4)	1.0 (0 – 3)	1.0 (0 – 3)	1.0 (0 -4)
Athlete Career and Education (ACE)/Life Management specialists(s)	1.6 (0 - 3)	1.7 (0 - >10)	1.9 (0 - >10)	1.4 (0 – 3)

Based on the above data it seems that there is no connection between Olympic ranking and/or Center designation and average and/or range of staff in any of the measured skilled staff areas.

(Note: Each group of 'Other' specialist(s) listed in **Table 51**, below, is from an individual Center according to the Center's respective ranking or designation. Therefore, each item is listed twice to reflect the dual classification of each Center)

Table 51 – Additional staff not listed in the previous question according to Olympic Ranking and Center category.

Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Consultant for Education & Housing			Consultant for Education & Housing
	2 'Rehab' Coaches	2 'Rehab' Coaches	
	15-20 University Trainees		15-20 University Trainees
	5 Nutrition Scientists	5 Nutrition Scientists	
Knowledge management experts & Software developer			Knowledge management experts & Software developer
	3 Anthropometry Specialists. 2 Nutritionists, 1 Lab Technician, 1 Radiographer	3 Anthropometry Specialists. 2 Nutritionists, 1 Lab Technician, 1 Radiographer	•
4 Nutritionist, 1 Phlebotomist	_		4 Nutritionist, 1 Phlebotomist
	P/T Nutrition specialist		P/T Nutrition specialist

Section 7 - Finances

Main Sources of Financial Support for Training Centers

Table 52 - Number (and Range) of different sources funding partners.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Number (and Range) of different sources	2.9 (1 – 4)	2.5 (1 – 3)	2.2 (1 – 3)	3.0 (1 -4)

From the above Table it seems that all Training Centers, regardless of the Olympic Ranking of their country or whether they are National vs. R/S/P Centers, rely on multiple funding sources. Only 2 Centers (one Top 20, R/S/P Center and one a >20, National Center) relied completely on 1 single funding source.

Table 53 - Percentage of operating budget from respective funding sources.

		Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional / State/ Provinci al Center
Funding source					
	0%	3	3	2	5
	1 – 10%	2			2
Federal/National	11 – 25%		3	3	
Government	26 – 50%	3	2	2 2	3
Government	51 – 75%	3	1	2	2
	75 – 99%	1	3	3	1
	100%		1	1	
	0%	1	5	6	
	1 – 10%	2	2		4
Pagional/State/	11 – 25%	1	1	1	1
Regional/State/ Provincial Government	26 – 50%	2	1	1	2
Provincial Government	51 – 75%	3	1		4
	75 – 99%	3			3
	100%	1			1
	0%	1	6	4	3
	1 – 10%	6	4	3	7
Non-Government (e.g.	11 – 25%	2	1		3
private donations,	26 – 50%				
sponsors)	51 – 75%				
	75 – 99%	1		1	
	100%				
	0%				
Solf gonerated Boyenus	1 – 10%	6	3	3	6
Self-generated Revenue	11 – 25%	2	1	1	2
(e.g. merchandise sales,	26 – 50%	2	2	3	1
fee for services, memberships etc.)	51 – 75%		4	3	1
memberships etc.)	75 – 99%		2	1	1
	100%				

Also note that 1 Top 20, R/S/P, Center received 11-25% of funds from National Sport Federations.

Annual "operating" budget of Training Centers (i.e. excluding capital building costs, maintenance, construction etc.)

Table 54 – Annual Operating budget of Training Centers.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Less than USD\$500K	0	1	0	1
USD\$500K – \$1 mm	1	1	1	1
USD \$1 mm - \$5 mm	8	7	6	9
USD \$5mm - \$10mm	4	2	3	3
>USD\$10mm	1	3	3	1

Based on the above data it seems that there is no connection between Olympic ranking and/or Center designation and the amount of total operating budget.

Section 8 - Affiliations/Partnerships

Official/Formal Partnerships with Training Centers and Other Entities

Table 55 - Official/formal partnerships between Training Centers and other organizations/entities.

	Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
Officially recognized Training Site/Training Center for an International Sport Federation		1	1	
Officially recognized Training Site/Training Center for an National Sport Governing Body	14	10	10	14
No official affiliation/partnerships with any other organization	1	2	2	1

Detail Relating to International and/or National Sport Organizations

Table 56 - Detail relating to international and/or national sport organizations

Top 20 Olympic ranking	> 20 Olympic ranking	National Training Center	Regional/ State/ Provincial Center
7 Centers have official NOC recognition			7 Centers have official NOC recognition
1 Center has official Paralympic Committee recognition			Center has official Paralympic Committee recognition
1 Center has official IOC recognition			1 Center has official IOC recognition
	1 Center has multiple National Team Training Center designation and/or National Centers of Excellence		1 Center has multiple National Team Training Center designation and/or National Centers of Excellence