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Elite clubs and National Teams: sharing the same party?

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Introduction

More than one billion fans tuned in to watch the final of the 2014 FIFA World Cup Brazil™, with the competition reaching a global in-home television audience of 3.2 billion people (Television Audience Report for the 2014 FIFA World Cup). From the 14th of June to the 15th of July 2018, the 21st World Cup (WC) in Russia should overtake this audience. During the competition, every pass, tackle or sprint performed will still be scrutinized by billions of fans, media and various professionals of the game. “What are their chances to make it?” “Has the coach chosen the right system?” “Are players fit enough to perform through the entire competition?”

While national teams now have resources and staff comparable to most elite clubs in the top leagues, could/should national staff members really be held fully responsible for players’ fitness and performance during the tournament? The lead up to this incredible event is complex, with the majority of players having played their last domestic game less than a month before the start of the competition. In this specific context, preparing the players is always a challenge for national team staff, who have to find the right balance between i) recovery to allow players to regenerate from their exhausting domestic league and ii) training to get them fit and ready for the competition. The challenge is even greater than meets the eye, since in contrast to a club setting where practitioners have frequent, continuous contact with players that allows ongoing monitoring (4, 5), national team staff have very limited contact time with their players and have to work discontinuously with them. This interrupted player monitoring makes the assessment of players’ readiness and fitness more difficult (e.g., less historical data to compare with, less knowledge of context). In fact, over one season, players train and play for about 10 months with their respective clubs, while they may spend only 4 x 10 days during the year with their national teams (i.e., “international breaks”), before the 3-week pre-WC preparation. In between the end of the 2017 Euro and June the 14th, international players would have spent about 250-270 days with their clubs, and at best, 60-70 days with their national teams (1). Finally, players from a single national team often play in more than 10 different clubs and different leagues, which dictates their time of arrival when joining their national team. The final of the UEFA Champions League is May the 26th, the English Premier League and the German Bundesliga end on the 12-13th of May, La Liga (Spain), Serie A (Italy), Ligue 1 (France) all end on the 19-20th of May. The competitive standards and the type/amount of training those players engage in is very heterogeneous, which further complicates the understanding of their individual level of preparation leading to the WC.

It becomes intuitive that success at the WC should find its roots planted in the collaboration between national teams and elite club staff. While those two latter entities have likely different objectives (i.e., winning the domestic titles vs. WC) over different time windows (i.e., 10 vs. 1 month), it is *in fine* in the interest of both to manage well the health and performance level of the players that they look after alternatively during the year. For both entities, the period when the players are ‘with the other’ could represent a ‘black period’ with no or little control of load and training methods, which can be problematic for all. Coaches and performance staff from national teams are generally seeking first for players’ readiness to prepare their friendly/qualifying matches. In contrast, the greatest hopes of club practitioners are to get their players back injury-free and not overloaded by match accumulation (international match starters) and conditioned enough (subs) for the start of the next domestic league phase/season upon their return from the international breaks/WC. While those objectives may sound opposites on the short term (i.e., winning at all cost vs. keeping players fit and healthy), they may in fact be both achieved via improved communication lines and advanced collaborative work between both entities.

The most important elements that need to be transmitted/followed up by both entities are the following (not exhaustive):

- *Readiness to play, training status and fitness.* Readiness to play can be assessed through strength assessment (using dynamometers, force plates, isokinetic measures or

velocity-based training), biological testing (e.g., creatine kinase, urea) and wellness/wellbeing questionnaires. Fitness tests include submaximal runs on the pitch or maximal treadmill tests (heart rate (HR) and blood lactate often measured, oxygen uptake, less frequently). These quantitative data are obviously not enough and need to be completed by qualitative statements that can't be evidenced with numbers, e.g., is the player 100% fit and ready to play vs. still carrying some forms of soreness/weakness/illness that need to be looked after for a few days. The information is likely of interest for both national teams and clubs, so that they can adapt training/match load as soon as players join them/return back.

- *Overall load management.* This should provide insights on what players are 'used to' (long-term, chronic load) and what they have just achieved (short-term, acute load) (7). This help practitioners adapting load to each individual player, while avoiding unaccustomed training load and contents. Generally, this involves match and training exposures (min/hours), GPS data and rate of perceived exertion (RPE) load over the few weeks preceding the international duties (clubs → national teams) or during the international duty (national teams → clubs).
- *Specific (injury prevention and/or strength) programs* (if any) in relation to injury history/profile and identified weaknesses as generally shared by team doctors and head physios. This includes players' daily routines performed with the club physios or strength coaches that would need to be continued during the international duty (clubs → national teams).
- *Nutritional strategies* (if any, in relation to allergies, diets, preferences, supplements; clubs → national teams). It is highly useful for national team staff to know what types of food complements and supplements, or post-match drinks players are used to. It is never convenient for club nutritionists to prepare 12 days of daily supplements for players to take away, which are likely to be lost or forgotten in player's bags and lockers.

While the process of exchanging the above-mentioned information may seem straightforward and could be completed with a few phones calls and emails, there are in fact many sub-optimal scenarios in practice (Table 1). The ideal scenario occurs when both entities use the same tests and technologies: data can be exchanged directly. What happens often however, is that while both entities implement some tests and use monitoring technologies, those are different for various reasons (e.g., habits, beliefs, resources): there is therefore a need i) to use correspondences or create equivalences (e.g., calibrations equations (3)) between the different tests/data/technologies used in each team (= least bad option), or ii) that one entity convinces the other to change his testing approach/technology (= unlikely). Finally, the worst case scenario is when players are not monitored by one or both structures, or that for various reasons they don't want to share data (1). It is also worth noting that staff from both national teams and elite clubs are rarely stable, which complicates further the continuous exchange of information. In relation to the human factor, it is also very difficult to define training and testing approaches that satisfy all, since there is obviously not only one way to win trophies. The legitimacy of national team over club staff and conversely is also often a challenge when it comes to making decisions on which data /information to monitor, share and use.

Finally, the protection and privacy of individual data is a very sensitive case those days (e.g., #Facebookgate) and can also represent a barrier to the sharing of data. While today the understanding and application of the General Data Protection Regulation law (GDPR (9)) is likely national team- and club-dependent, the enforcement of the law from the 25th of May 2018 will require practitioners to both regulate and organize the amount and types of information they share between each other. Until clear guidelines are offered to practitioners on how to best comply with the law, practitioners may need to use a conservative approach; the GDPR will likely further impact their ability to share information before the upcoming WC.

Table 1. Ideal scenario vs. common practice and possible solutions when it comes to assessing readiness/fitness and monitoring training and match loads in some national teams and elite clubs.

| <i>Examples of tests</i> | Ideal scenario | Common practice (real) | Solutions |
|---------------------------------|--|---|---|
| | <ul style="list-style-type: none"> Both assess lower-limb strength and imbalances using a given handheld dynamometer (same brand) | <ul style="list-style-type: none"> A club use an isokinetic machine while with the national team, players are tested with force plates (8). | <ul style="list-style-type: none"> Use calibration equations when possible (e.g., jump tests). Perform both tests and measures for the players of interest. |
| <i>To monitor training load</i> | <ul style="list-style-type: none"> Both entities use the same GPS system (same brand and model). They can directly share data files so that in-house analyses can be done by both groups of practitioners. Practitioners can select themselves there variable, speed zones, acute/chronic (A/C) windows, etc. | <ul style="list-style-type: none"> Different technologies are used. Different locomotor speed-zone are used. Different metrics are reported. If A/C ratios are calculated, the time windows (e.g., 7/28 vs. 5/20 days) are different. | <ul style="list-style-type: none"> Use calibration equations for distance into zones (3) to convert data from one system to the other. Use in-house database to predict the expected load for the variables of interest that were not provided (6). |

While there may be some (rare) situations where clubs may manage to convince national teams (or conversely) to modify their testing approach and technology to match their own, in the majority of cases, practitioners have to “deal with” what they are given (scenario 2). We offer in this last section some guidelines on how to facilitate those exchanges. We suggest practitioners to:

- **What:** discuss what they -and what the others- are looking for in terms of information and data: is the national team looking for RPE and/or GPS loads? For how long do they need historical data? Is the club using metabolic power and/or distance into speed zones? What are the supplements that players need to ingest daily at the moment? Seek also with the other party if additional tests/measures can be implemented at both ends to ensure continuity in the data collection when no equivalences between the existing tests can be found (Table 1).
- **How:** see which is the best data format to be shared: ideally for locomotor load monitoring, sharing raw data is optimal if the others are able to analyze them by themselves (e.g., raw GPS file as downloaded from a GPS unit, Table 1), or at least “transformable data” that can be easily re-analyzed if required (e.g., providing the type of equipment that was used for data collection). When it comes to data that don’t require analysis (e.g., body mass, minute played), we believe that an Excel-based database is generally the most relevant option (over a .pdf with graph bars for example), since it likely allows practitioners to copy/paste directly the data into their own database. Prepare and share typical templates or section headers of their own database/common database between national teams and clubs to facilitate data entry

and collection. In the best-case scenario, full individual-players' databases can also be shared for some variables.

- When: make sure that information are transmitted/phone calls are given before the players actually arrive to the other location to allow staff to anticipate their upcoming training schedule in relation to their previous training and match load. This is especially important when national team and club match are very close, such as when a league match is programmed on the Saturday following an international match played on Wednesday. While for those having played on Wednesday, training contents are straightforward (i.e., recovery), the optimal loading and contents for those who didn't play is less evident without any information.

In conclusion, since there is not only one road to Rome and there may be as many useful approaches and technologies than there are staff in national teams and elite clubs, the process of sharing *meaningful* information is more complex than meet the eye. Since most of the time practitioners have to deal with interrupted and inconstant types of data/information, a well-thought and continuous communication between staff is key. Their collaboration and the trust they put in each other is crucial to improve overall player's monitoring when transitioning from clubs to national teams (and conversely), which, in turn, can only have a positive impact on each team's performance. This process of data/information/idea exchange is also part of a larger-scale mindset, which generally benefits all parties when it comes to growing and learning from experience (2). This includes sharing transformable numerical data rather than static graphical reports, and sometimes adding a few variables/tests to their own protocols to allow the continuation of data monitoring for the other entity. Practitioners will however likely face new challenges to share their data within the respect of the ever more constraining laws of individual data protection. Until clear guidelines are provided to clarify the best ways to share data, practitioners will need to act with transparency and use common sense to decide what to share and how. Whether the team that will win the 2018 WC would be the one with the best communication lines with clubs is unpredictable because football will remain football, but at least, they will definitely play their opening game with a greater level of confidence – the feeling of having done the best they could to prepare their players for the tournament. Without doubts, national teams and club staff should understand that they all are invited to the same party.

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