

Using industry data to understand patterns of play

What do we currently know?

By analysing data on real play, we have improved our understanding of how people gamble on machines in bookmakers, adult gambling centres and bingo premises and informed regulatory change. We have also started to explore data on real patterns of play on online slot and casino games.

What do we need to find out?

We need to understand how patterns of play vary across different environments, products and characteristics. This will require descriptive analysis of industry data on people's real gambling behaviour. Data will also need to be analysed to identify which environments, products and characteristics are most strongly associated with harmful play. This will require insights from data on the socio-economic, demographic and at-risk/problem gambling status of gamblers using these products.

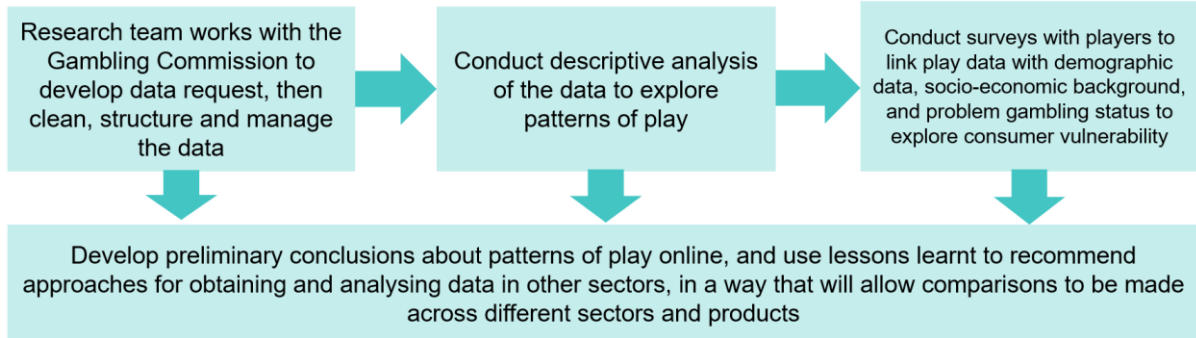
Why do we need to understand this?

This will help us to understand if and how some gambling products are more harmful than others, and why this is the case. This will help us to encourage safer play and target interventions and regulatory change where they will be most effective.

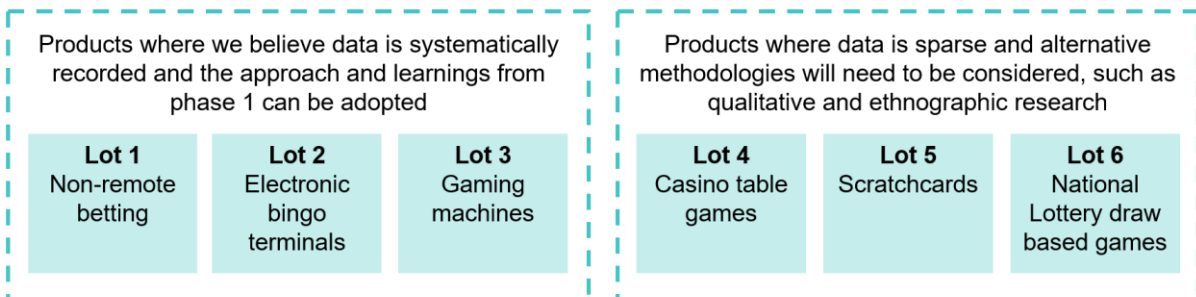
Phase 1 – online patterns of play

1. This brief sets out the requirements for research to understand patterns of play, outlined in the [RGSB Research Programme 2017-2019](#) and contributing to priority action 4 in the [National Responsible Gambling Strategy](#).
2. This is a large programme of work and therefore we have split it into phases and lots so that commissioning can be staggered and what we learn from each phase can inform the next. **This brief sets out our requirements for phase 1 which will explore online patterns of play.**
3. The following diagram provides an overview of our intended approach to the overall programme of work and to phase 1 of the project.

Phase 1 – exploring online patterns of play



Phase 2 – additional research lots exploring patterns of play in other sectors*



* These lots will be commissioned at a later date to allow us to apply learnings from phase 1

4. This project brief is structured as follows:

- **Part A** – Provides an introduction and background information
- **Part B** – Sets out the research objectives and questions for phase 1
- **Part C** – Explains the core components of phase 1 and provides an outline of priority product categories and key metrics
- **Part D** – Gives more information on the formation of research teams and research governance.

5. A summary of related research can be found in Annex A and an overview of the wider RGSB research programme is set out in Annex B.

Part A – Introduction

6. We need to understand how gambling behaviour and patterns of play vary across different products and environments. We also need to understand if, how and why some gambling environments, products and characteristics are more harmful than others.
7. We also need to improve our understanding of consumer vulnerability by linking industry play data with individuals' demographic data, socio-economic background, and at-risk/problem gambling status.
8. This research needs to go beyond simply analysing data which is already held. It will involve an extensive analysis of real play data provided by the gambling industry and will also require effort to collect and link this socio-demographic data and at-risk / problem gambling status from players.
9. Industry data exists in many forms, and the level and type of data available vary from sector to sector. The most complete data records are held by online gambling companies, where data is available for individual players. Analysis of online play data will therefore constitute the first phase of this research.
10. For this project, the Gambling Commission will make a data request to industry to obtain the data needed for the research, as we do not currently have access to the datasets required. The research team will work with the Gambling Commission to shape the data request made to industry. Industry will also be asked to support actions to gain consent from players for additional data to be collected. The Gambling Commission is committed to supporting this process to ensure that the successful research team have access to the data and to the players they need to answer the research questions.

Terminology

By **environments** we mean the place where gambling takes place, e.g. online, licensed betting offices, adult entertainment centres, family entertainments centres, bingo halls, casinos, etc.

By **products** we mean different forms of gambling, e.g. electronic gaming machines, table casino games, online slots, online sports betting, etc.

By **characteristics** we mean both structural features (e.g. stake limits, speed of play, size of prize, features such as auto-play) and contextual characteristics (e.g. the ability to gamble with debit or credit cards, availability of gambling management tools)

Background and policy context

11. In 2014 GambleAware (formerly known as the Responsible Gambling Trust) published findings from a series of scoping, contextual and evaluation studies into gaming machines in licensed betting offices (LBOs). The overall objective was to analyse industry-held data in order to identify potential indicators of harmful patterns of play.
12. A detailed overview of this programme of work was provided by the Machines Research Oversight Panel (MROP) - [An investigation into gaming machines in licensed betting offices: exploring risk, harm and customer behaviour](#)
13. This research greatly improved our understanding of how people gamble on gaming machines and included a number of follow-up studies.
14. More recently, a paper was published on patterns of play in online gambling. This was based on a limited, aggregate dataset provided to the Gambling Commission by online operators. This work highlighted how useful this approach is to improve understanding of patterns of play, and how much more we could learn with more detailed data. The research identified options for future research which should be considered in the development of bids for phase 1.
15. We have a limited understanding of how people play in other gambling environments. Even where research has been conducted our understanding is still only partial. We need to know more about how the potential for harmful play varies by environment or location. This will require comparisons to be made across products and sectors in phase 2 of this research¹.
16. We will also use this research to identify what data the industry should share on a regular basis. It will help us to identify the core metrics and data points that we need to collect from gambling operators on an ongoing basis to continue to build up our understanding of patterns of play. GambleAware are currently scoping approaches for setting up a data repository to be used by researchers to conduct ongoing analysis in this area. We require the successful research team to contribute to this process based on their learning from undertaking this research.

¹ To be commissioned at a later date

Part B – Research objectives and questions

17. The core objectives of this research are to understand:

- What the basic patterns of play are within online gambling
- How these patterns of play vary for different types of people
- How patterns of play vary among different products and characteristics
- What types of behaviours are associated with problem or at-risk gambling (for example use of credit cards, reverse withdrawals etc).

18. We have identified a number of research questions which will need to be answered in phase 1 of the research:

- How do people gamble online?
- Do people play differently on different online products?
- Do patterns of play on similar products vary by other characteristics or factors (e.g. depending on whether credit cards are being used or the time of day the gambling is taking place?)
- Do gamblers play differently when using gambling management tools?
- How does people's play vary according to demographics, socio-economic background, attitudes to gambling, and at-risk / problem gambling status?
- What insight can we get from this player data on the affordability and impact of losses?
- Are any particular online products and characteristics more strongly associated with harmful play?
- Which online products and characteristics are particularly attractive to problem and at-risk gamblers compared with gamblers who are not classified as at-risk?
- Are there any online products or characteristics that are less associated with harmful play or act as 'protective characteristics'?
- Which data are most useful in analysing patterns of play, and how frequently will they need to be refreshed to enable us to continue improving our understanding of gambling behaviour?

Part C – Priority product categories and key metrics

19. Phase 1 will focus on **online gambling**. This is an area where we believe data should be most readily available. It is also an area where we have a number of evidence gaps in how people play. It is a large and growing market and therefore there is significant scope for players being harmed by their gambling in this environment.
20. We have identified the following online products (listed in priority order) for which we believe that data are being systematically recorded:
 - Online betting – where we currently have very little descriptive data for this very large product group. This includes sports and non-sports betting, betting exchanges and pool betting.
 - Slots / casino games – where currently have an aggregate understanding (see Forrest and McHale, 2018) which should act as the foundation for further data collection and analysis
 - National Lottery instant wins, and other high frequency online lottery products
 - Online bingo
 - Online poker
 - National Lottery draw based games – where tickets are bought online

Data collection

The Gambling Commission does not currently hold the data that is needed for this research. We intend to work with research teams to identify what data is needed and available. The Commission will lead a single co-ordinated data request to the industry. We hope that the industry will comply with this request, but the Commission has powers to compel the provision of the required data if necessary.

This will therefore require data scientists and researchers to work together to ensure that they get the data they need to answer the research questions. Once we have obtained the datasets the successful team will also need to lead on cleaning, editing, restructuring and managing the data so that it can be analysed. We anticipate that this will require a significant amount of work.

Key metrics

21. Some of the key metrics that could be analysed will vary according to a sector's ability to link play to an individual and across sessions. As the supporting documents outline, this is more easily achieved in the online environment. However, they may include (but are not limited to):
 - Stakes (size, frequency, time between)
 - Volume and value of deposits

- Speed of play
- Day of the week / time of day
- Session duration and number of sessions
- Session and longer-term outcomes
- Availability of additional products or games
- Proportion of revenue from different percentiles of customers (e.g. percentage of revenue from 10% of customers).

22. Where possible it will also be beneficial to consider broader contextual data, such as:

- Payment methods used (e.g. credit or debit cards)
- Patterns of withdrawal and deposit
- Use of gambling management tools (e.g. where pre-commitment spend or time limits are set)
- Contact with customers services / customer interaction
- Wider gambling behaviour (i.e. other products played).

23. In the online environment it is possible to link key metrics to demographic data such as age, sex and region. It is possible that other variables could be merged onto the datasets to explore how play varies for different types of people. However, to explore this further we anticipate that surveys of online players will need to be conducted to gain more socio-demographic information as well as data on players' problem or at-risk gambling status.

24. We are therefore looking for teams which include individuals with survey design expertise to develop a suitable methodology and identify any risks or issues that may need to be mitigated (such as achieving good response rates or being compliant with GDPR).

Part D – Research teams and research governance

25. This will be an extensive and complex area of research, which is likely to take three to four years to complete in full (i.e. both phase 1 and phase 2). We anticipate that phase 1 will last for two years.
26. Different organisations will have different skills and capabilities. We need people to work together to successfully deliver the objectives of this research. We envisage that the project could build on approaches employed in GambleAware's machines research programme.
27. We will be pleased to see responses to this brief from fully formed research teams capable of delivering the entire project, as well as from people and organisations who have skills and capabilities to deliver specific elements of the research and would like to form part of a bigger research team.
28. Within the successful research team, we will need a specified project management lead and knowledge manager. Their role will be to oversee all of the work being conducted by the team, making sure that each aspect is feeding into the others, and to liaise with GambleAware. This will require strong project management skills, plus good knowledge of the topic area to ensure that the research objectives are fully met. The project management role will include:
 - Oversight of the overall delivery of the project
 - Ensuring the whole project fits together and that findings complement each other
 - Providing critical challenge where necessary

Research governance

29. In September 2016, the Responsible Gambling Strategy Board (RGSB) and GambleAware published a Research Commissioning and Governance Procedure which describes how research priorities are set and how research programmes are commissioned under the tripartite agreement between the Board, GambleAware and the Gambling Commission². The purpose of the Procedure is to give transparency about the arrangements and to provide assurance that research priorities are set independently and are delivered with integrity.
30. The Research Procedure makes clear that the Responsible Gambling Strategy Board, not GambleAware, is responsible for producing the briefs that set out the questions and context for the research that is then commissioned by GambleAware.

² [Research Commissioning and Governance Procedure](#), Responsible Gambling Strategy Board, September 2016

Annex A: What we already know

1. In 2014, GambleAware published a programme of research exploring gaming machines. We envisage that a similar approach could be taken with other products and sectors as was taken in this research. It is therefore essential to familiarise yourselves with the following reports:
 - [Theoretical markers of harm for machine play in a bookmaker's. A rapid scoping review](#) (Wardle, Parke and Excell, 2014)
 - [Identifying problem gambling - findings from a survey of loyalty card customers](#) (Wardle et al, 2014)
 - [Predicting problem gamblers: analysis of industry data](#) (Excell et al, 2014)
 - [Patterns of play: analysis of data from machines in bookmakers](#) (Wardle et al, 2014)

2. In 2015 and 2016, research was conducted to analyse data from category B1 machines in casinos:
 - [Tracked play on B1 gaming machines in British casinos](#) (Forrest and McHale, 2016)
 - [Evaluating the impact of the uplift of stakes and prizes on B1 gaming machines in casinos](#) (Forrest, McHale and Wardle, 2015)

3. In 2016, GambleAware published three further reports building on their earlier research into gaming machines:
 - [People who play machines in bookmakers: secondary analysis of loyalty card survey data](#) (Wardle, 2016)
 - [Examining the effect of proximity and concentration of B2 machines to gambling play](#) (Wardle and Astbury, 2016)
 - [Secondary Analysis of Machines Data](#) (Excell and Grudzien, 2016)

4. In 2017 and 2018, the following studies were conducted to explore online gambling behaviour using play data and will also need to be considered:
 - [Analysis of play among British online gamblers on slots and other casino-style games](#) (Forrest and McHale, 2018)
 - [Review of online gambling](#) (Gambling Commission, 2018)
 - [Getting grounded in problematic play: using digital grounded theory to understand problem gambling and harm minimisation opportunities in remote gambling](#) (Parke and Parke, 2017)
 - [Remote Gambling Research: Interim Report on Phase 2](#) (PwC, 2017)

5. The following Gambling Commission and DCMS papers also contain analysis on real play data:

- [Review of gaming machines and social responsibility measures – formal advice](#) (Gambling Commission, 2018)
- [Evaluation of Gaming Machine \(Circumstances of Use\) \(Amendment\) Regulations 2015](#) (DCMS, 2016)

Annex B: Research Programme: 2018-22

1. The research programme sets out priority topics for research which will enable effective actions to be taken to reduce gambling-related harms. These priorities have been set by the Responsible Gambling Strategy Board. This is intended to provide a separation between the funding for research on gambling and the setting of research priorities and questions. Although we sought views from a wide range of stakeholders, the final decision on the contents of this programme is our own.
2. This document builds on our first research programme, which was always intended to be a living document, subject to be adapted in response to changes in the scale and scope of projects required.
3. Following an assessment of progress to date we have re-packaged the programme into six core themes. This reflects the need to fill priority gaps in the evidence base and help progress delivery of the National Responsible Gambling Strategy³, the overall aim of which is to reduce gambling-related harms. We aim to deliver the programme across the next three years.
4. The re-focusing of priorities will enable us to be more ambitious in our research objectives and deliver larger scale projects which will provide robust evidence to feed into a complex and evolving policy environment. It will allow the research to be commissioned through consortium teams which encourage the involvement of experts and specialists new to the field of gambling.⁴
5. By being specific about the research needed, and setting the research agenda independently, we hope to encourage a wider range of academics, research agencies and others to deliver high quality research. It is vital that independent academics and researchers can contribute to this space without risk to their reputations.
6. Figure 1 below outlines the core research themes and the overarching aim for each area of work.

³ <http://www.rgsb.org.uk/PDF/Strategy-2016-2019.pdf>

⁴ This is intended to help widen the field of academics and agencies involved in gambling research, in line with Priority Action 10 of the National Responsible Gambling Strategy.

Figure 1: Core research themes

