



邁向 2025

香港非傳染病防控策略及行動計劃
Strategy and Action Plan to
Prevent and Control NCD in Hong Kong



衛生署
Department of Health

Public Health Implications of eSports

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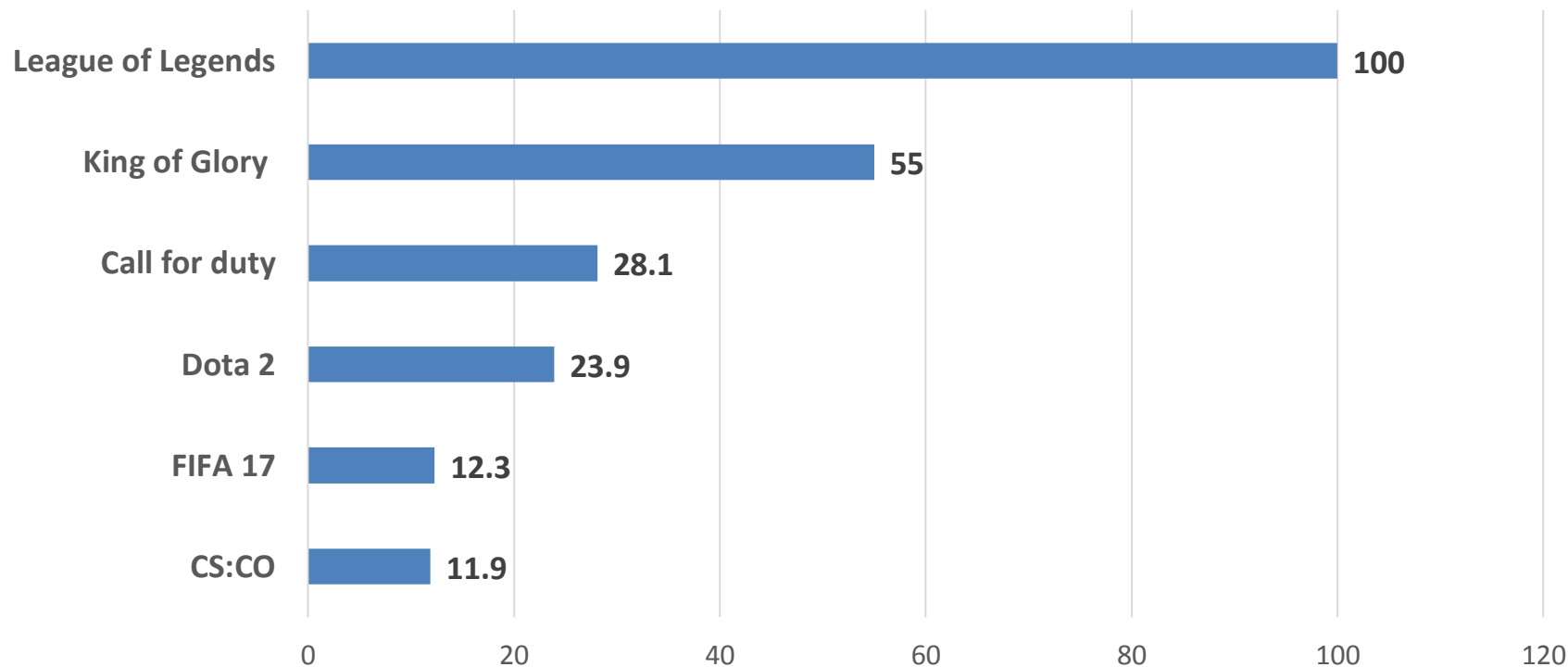
What is eSports?

- Short form of “electronic Sports”
- No consensus on the definition
- Generally agreed as “competitive video gaming”



Global Players (million)

Number of players of selected eSport games worldwide as of August 2017

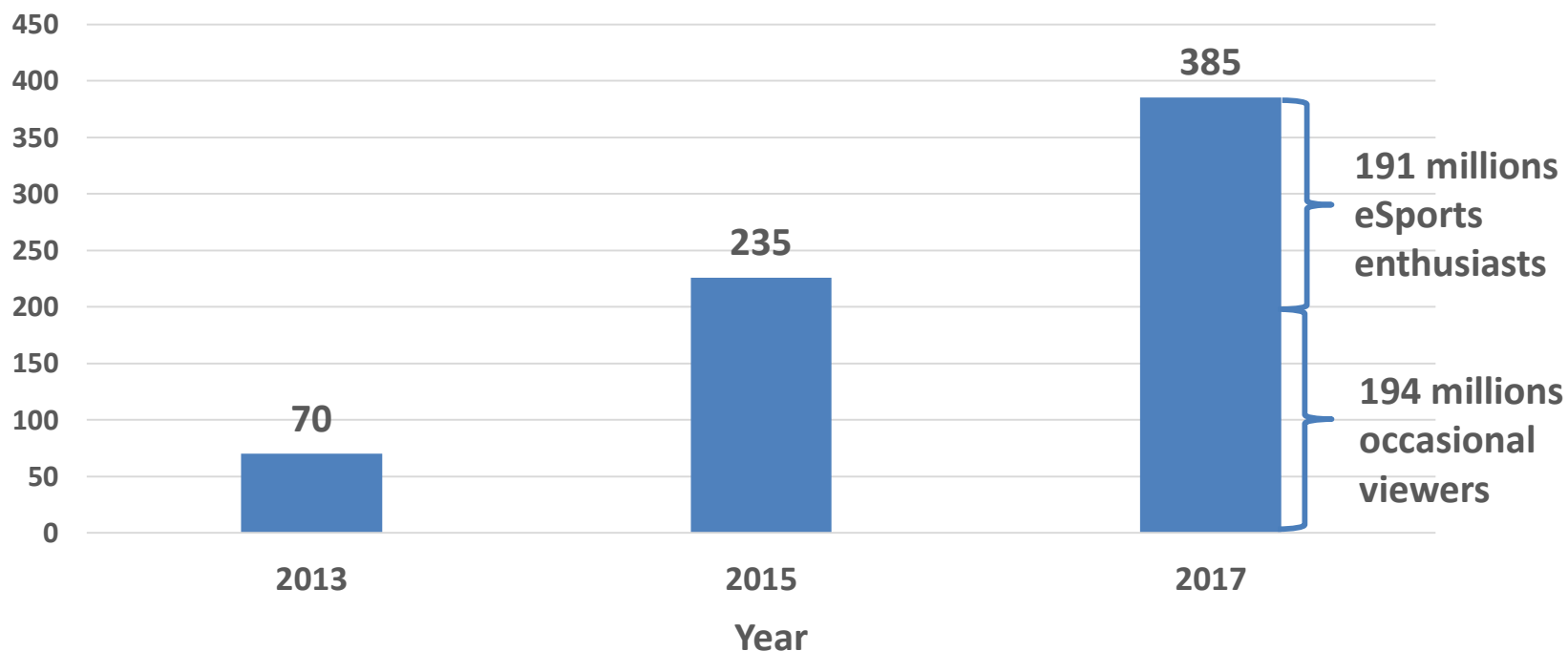


Million

3

Reference: (Fortune, 2017; Statista, 2017)

Global Audiences (million)



“Live Streaming” technology allows viewers to watch eSports competitions in anytime, anywhere



Reference: (Newzoo, 2017)

Increased Popularity of eSports

- A lot of different tournaments organized by gaming companies all over the world with huge prize pools
- It will be an official medal event in the 2022 Hangzhou Asian Games
- Like in many other places, HK government (Innovation and Technology Bureau, Tourism Board) is supporting the development of eSports
- The community is also gearing up to prepare for the blooming market in Hong Kong



International Concerns on Problematic Internet Use and Gaming

- World Health Organization (WHO) has been organising annual expert meeting since 2014
- In June 2018, WHO included Gaming Disorder and Hazardous Gaming in the 11th Revision of the International Classification of Diseases (ICD-11)



Gaming Disorder (GD)

- Impaired control over gaming (e.g. onset, frequency, intensity, duration, termination, context, etc.)
- Increasing priority given to gaming over other activities
- Continuation or escalation of gaming despite the occurrence of negative consequences
- Significant impairment in personal, family, social, educational, occupational or other important areas of functioning
- Duration of at least 12 months



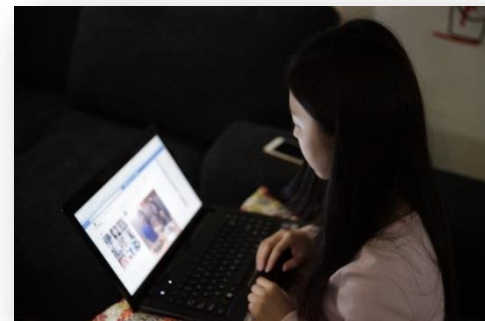
Hazardous Gaming (HG)

- Increases the risk of harmful physical or mental health consequences to the individual or to others around this individual
- The pattern of gaming is often persists in spite of awareness of increased risk of harm to the individual or to others



Negative Consequences of Excessive Video Game Use

- **Psychosocial health correlates**
 - Sacrificing study, hobbies, socializing , time with family
 - An absence of real life relationship
 - Lower psychosocial well-being and loneliness
 - Poor social skills
 - Maladaptive coping
 - Decreased academic achievement



Negative Consequences of Excessive Video Game Use

- **Psychosocial health correlates**
 - Decrease in verbal memory performance
 - Maladaptive cognitions
 - Lower attention span
 - Increased stress
 - Aggressive/oppositional behavior and hostility
 - Suicidal ideation



Negative Consequences of Excessive Video Game Use

- **Physical & mental health correlates**
 - Obesity
 - Sleep abnormalities
 - Wrist pain, neck pain, repetitive strain injuries
 - Numbness of fingers
 - Tenosynovitis (Nintendinitis), sore tendons
 - Blisters, calluses



Negative Consequences of Excessive Video Game Use

- **Physical & mental health correlates**
 - Hand arm vibration syndrome
 - Psychosomatic challenges
 - Auditory hallucinations
 - Enuresis, encopresis
 - Epileptic seizures



Potential Health Risks for Professional Players

- **Occupational strain**
 - Sit for long days from 12 - 15 hours without much gross motor movement
- **Physical ailments**
 - Focuses on repeated typing practice
 - Deep vein thrombosis, carpal tunnel or back strains
- **High level of stress or even burnout**
 - “Working” in a highly competitive environment



Future Prospect of Trainees

- Very few will be able to reach the professional level of gaming
- Of the estimated 1.5 billion contemporary gamers, only a few thousands seem to be reaching the professional competitive status
- Some of trainees may drop out from schools at age 15-17, to commit an intensive training
 - Uncertain career pathways
 - Low educational level

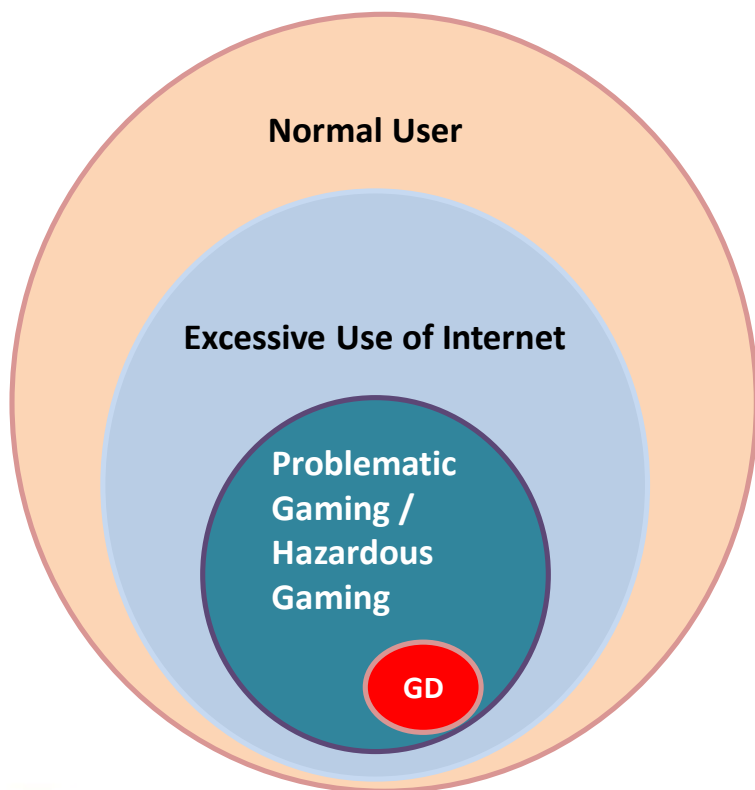


Potential Health Risks for Fans

- Fans are not only gamers but also dedicated viewers
- On average, watches eSports activities 19 times a month, with a session length of 2.2 hours
- Other issues such as overspending problem and gambling



Normal Activity vs Gaming Disorder



- Video and digital gaming is a normal and popular activity
- **GD affects only a small proportion of these gamers**
- With the increasing number of gamers population, the actual number of affected individuals warrants public health concern



Challenges

- Research on adverse health effects on eSports per se is limited
- With the escalating popularity of eSports, there is a need to review the existing knowledge on problematic gaming and conduct more research
- Identification of the boundaries between high and problematic involvement of gaming activities



Conclusion

- ESports, which is considered as a kind of competitive video gaming, has been growing rapidly in recent years with enormous number of players around the globe
- Based on current evidence, it is unable to conclude whether eSports per se will result in higher prevalence of problematic gaming
- It is reasonable to expect an increasing number of problematic gaming (including GD and HD) when gaming activity is being further promoted under the umbrella of eSports, even only a minority of gamers will result in problematic gaming



Conclusion

- From the public health perspective, it is important to monitor its potential health risks exerted on individuals as well as the society
- With the increasing demand for treatment services for gaming addition/disorder in different places, it is definitely a public health concern if eSports is further promoted without looking into the implications on health and related aspects



Healthy Use of Internet and Electronic Screen Products Webpage

www.studenthealth.gov.hk/english/internet/health_effects.html



- Health Tips
- Recommendations for Parents, Teachers, Primary School Student & Secondary School Student
- e-Report & Executive Summary
- Health Tips Videos & Cartoons
- Media Links



THANK YOU



Key Messages in the Panel Discussion

- Participation in gaming and eSports is a normal activity but there are definitely concerns from the public health perspective
- There is imbalance of information and some information sources do not explicitly mention conflicts of interest
- It is important to have a comprehensive discussion and assessment with a balanced view, in particular taking into consideration the potential health risks, when promoting eSports, be it in the umbrella of sport or as a technology / economic initiative

