



JOHNS HOPKINS
MEDICINE

POPULATION
HEALTH ANALYTICS

Review of Webinar Series to Date and the Use of the ACG System Across the World

Alan Thompson
Dr Steve Sutch

18th October 2023



1. Introduction to the JHHC team
2. Objectives of these webinars
3. Webinars to date - Parts I and II
4. ACG System usage across the world
5. Key themes and emerging priorities related to population health
6. Question and answer session



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- To introduce the ACG System team and make users aware of the support the team can provide
- To connect ACG System users from different parts of the world
- To facilitate the sharing of knowledge
- To obtain feedback from users regarding use cases, issues with the software or potential future developments
- To understand how we can better support ACG System users and their organisations/colleagues

| Ref | Original Date of Session | Subject | Speakers | Link to Recording |
|-----|-----------------------------|---|---|--|
| 1 | 1 st March 2023 | A Basic Introduction to the ACG System and the Main Markers | Alan Thompson & Steve Sutch, Johns Hopkins Healthcare Solutions | Click Here to Access Recording |
| 2 | 22 nd March 2023 | An Introduction to Some of the Supplementary Markers Produced by the ACG System | Alan Thompson & Steve Sutch, Johns Hopkins Healthcare Solutions | Click Here to Access Recording |
| 3 | 29 th March 2023 | Segmentation & Stratification Methodologies and an Introduction to the Patient Need Groups (PNGs) | James Barrett & Paul Molyneux, Johns Hopkins Healthcare Solutions | Click Here to Access Recording |
| 4 | 19 th April 2023 | An Introduction to Predictive Modelling and the ACG System Predictive Models | Steve Sutch & Paul Molyneux, Johns Hopkins Healthcare Solutions | Click Here to Access Recording |
| 5 | 3 rd May 2023 | An Overview of the Main Applications and Use Cases for the Johns Hopkins ACG System | Alan Thompson & Paul Molyneux, Johns Hopkins Healthcare Solutions | Click Here to Access Recording |



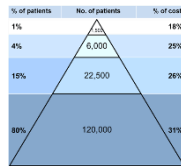
| Ref | Original Date of Session | Subject | Speakers | Link to Recording |
|-----|-----------------------------|--|--|--|
| 6 | 17 th May 2023 | Improving end-of-life care in Dorset | Janine Ord, Head of Population Health Management for Dorset ICS | Click Here to Access Recording |
| 7 | 7 th June 2023 | The "Planning for Integrated Care in General Practice (PIC GP)" project in Leicester, Leicestershire & Rutland ICS | Mark Pierce, Head of Population Health Management at LLR ICB | Click Here to Access Recording |
| 8 | 28 th June 2023 | A New Funding Model for Primary Care in Leicester, Leicestershire & Rutland ICS | Dr David Shepherd, FRCGP | Click Here to Access Recording |
| 9 | 5 th July 2023 | Improving Care for People with Learning Disabilities in Leicestershire | Kate Allardyce, BI Delivery Lead, NHS Midlands and Lancashire CSU & Sally Vallance, Public Health, Leicester | Click Here to Access Recording |
| 10 | 19 th July 2023 | Use of Patient Need Groups (PNGs) to Supportive Innovative Care Programmes in Frimley ICS | Alex Barnett, Associate Director of Analytics & Anna Fishta, Programme Lead, Frimley ICS | Click Here to Access Recording |
| 11 | 2 nd August 2023 | Outcomes Measurement & Evaluation Using the ACG System | Steve Sutch, Johns Hopkins Healthcare Solutions | Click Here to Access Recording |

| Ref | Day & Date | Time (UK) | Time (Central Europe) | Subject | Speakers | Link |
|-----|---|---------------|-----------------------|--|---|--|
| 12 | Wednesday, 18 th October 2023 | 14.00 - 14.45 | 15.00 – 15.45 | Review of Webinar Series to Date and the Use of the ACG System Across the World | Alan Thompson & Steve Sutch, Johns Hopkins Healthcare Solutions | Click here to join the meeting |
| 13 | Wednesday, 1 st November 2023 | 13.00 - 13.45 | 14.00 – 14.45 | Hotspotters: Identifying Complex Patients in Primary Care in The Netherlands | Dr. Shelley-Ann Girwar PhD, Researcher/Lecturer, Population Health Management at Leiden University Medical Center | Click here to join the meeting |
| 14 | Wednesday, 15 th November 2023 | 13.00 - 13.45 | 14.00 – 14.45 | Health Care Reforms in Portugal and Planned use of ACG System | Vanessa Ribeiro: Head of Planning and Innovation at Central Administration of the Health System (ACSS) & Cláudia Borges: Hospital Manager at ACSS | Click here to join the meeting |
| 15 | Wednesday, 29 th November 2023 | 13.00 - 13.45 | 14.00 – 14.45 | Understanding Social Needs & Social Determinants of Health in Relation to Population Health Management | Paul Molyneux & Steve Sutch, Johns Hopkins Healthcare Solutions | Click here to join the meeting |
| 16 | Wednesday, 6 th December 2023 | 13.00 - 13.45 | 14.00 – 14.45 | Using the ACG System to Improve Machine Learning Models in Healthcare in South Africa | Chanwyn Williams, Lead: Data Science at Medscheme, Cape Town, South Africa | Click here to join the meeting |



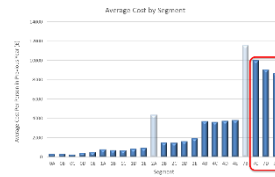


Population Health Profiling



- Understanding disease and morbidity distributions within a population
- Quantifying differences in casemix between different practices
- Stratifying based on overall morbidity burden, individual diseases and/or future risk

- Identifying key drivers of cost
- Segmentation of a population into mutually exclusive groups to aid population health management



Case Finding



- Identifying individuals and cohorts of people who are suitable for specific interventions or programmes of care
- Matching the right patients to the right care programmes

'Sophisticated case finding' techniques that further sub-stratify populations based on metrics such as:

- Degree of multimorbidity
- Presence of a mental health condition
- Other social determinants of health



Applications & Uses

Performance Assessment



- Ability to account for differences in casemix when comparing activity metrics such as emergency admission rates or A&E attendances
- Casemix adjustment allows for more meaningful comparisons and facilitates informed discussions with clinicians and managers
- Performance of care programmes and outcomes for people enrolled on these can be compared to outcomes for a clinically similar cohort

Resource Allocation



- The ability to quantify casemix allows for a much more equitable allocation of resources.
- Most primary care funding in Sweden is allocated based on casemix.
- In the UK, there a small but growing number of examples of casemix-adjusted allocation of resources include:
 - Projects in Berkshire and Leicestershire where new funding is allocated based on casemix in GP practices
 - Schemes in Gloucestershire and Berkshire where services are placed based on where the most patients are
 - Community diabetic nurses in Slough focusses on subset of diabetic patients with the most comorbidity



- Data and data analytics
 - Data integration, transformation, missing data, modelling methods
- Key themes around population health are still emerging
 - Segmentation, Stratification, whole population, Screening population groups
- Challenge of including social care, social determinants
 - Person level, Geographic, adding behavioural health, outcomes
- Ethical use of algorithms (fairness, bias)
 - Measurement, mitigation, use of Machine Learning and AI
- Funding – fair allocation of resources
 - Data, analytics, scope, integration (or not) of health and social systems



Q&A SESSION



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Thank You



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