



## Integrated Care Pilot – “Mrs Smith” meets the engine behind Kaiser Permanente

### What difference does SAS® make in the delivery of integrated care and reducing overall costs?

SAS® is the engine of analysis beneath Kaiser Permanente’s programmes of integrated care. SAS is also the engine beneath Tesco Clubcard and Sainsbury’s, as well as Amazon recommends. Banks and leading retailers use SAS on a day-to-day basis to bring together complex sets of data, build innovative insight and ultimately behaviour prediction, which they then use to transform outcomes and reduce costs. But how would it work in the NHS? Let’s look through the prism of the classic “Mrs Smith” at how SAS can transform her care.

SAS can build a true, rich “single view of Mrs Smith”, whether the systems are clinical, operational, structured in nice tidy fields or unstructured like web or text electronic notes. SAS can incorporate them all. Social factors impact on health status and need, yet are often missing from health records. For example, if Mrs Smith is widowed, she is at much higher risk of poorer recovery from an episode when back at her home. SAS can help incorporate all these “soft” factors into the understanding of Mrs Smith and help target her care more effectively.

Build a rich, flexible, “single view of the patient”, to evidence need.

### Which programmes are most appropriate for Mrs Smith?

Most risk stratification tools are too generic. The problems facing Mrs Smith in a London Borough, in Cornwall and in Tyneside vary greatly. SAS’ approach to “finding” Mrs Smith is very different – it enables the best use of all available data as evidence to build the best models for risk stratification. This allows a customised and a very nuanced approach to case finding those most at risk, enabling positive interventions before Mrs Smith develops a condition and increasing the likelihood of preventing deterioration.

Rapidly build unique, open models for risk stratification, across multiple conditions, to identify cohorts to target for early intervention. Solve detailed problems and predict cohorts for early intervention to maximize preventative impact.

To scale integrated care to population levels, and really drive efficiencies, SAS can both automate the processes and communication of care, putting Mrs Smith at the centre of her wellbeing. For example, after SAS has augmented clinical judgement by finding those Mrs Smiths who are at risk of developing Type 2 diabetes, it alerts the GP that Mrs Smith is being put on a special programme. It also updates the dashboard of call requirements for the district nurses and diabetes specialists and, if appropriate, Mrs Smith gets a text reminder of the visit - the SAS system knowing whether she uses and is likely to respond to a text. All of this is completely customisable from the same SAS system - care for frail elderly; young people with mental health issues - and driving medication adherence can all be driven by the same engine of SAS, pushing insight and actions to clinicians and patients alike.

Make these models "operational". Automate the interventions and desired preventions, for example sending information to clinicians and careers, and potentially the patient, driving activity along the care pathway. Identifying the next best action and the best way to do it. All within existing clinical systems, without change or upgrade.

Lastly, but critically, how do you measure the success of services to Mrs Smith? With SAS as the engine behind delivering better care to all the Mrs Smiths in an area, all these interactions and interventions are similarly captured enabling the financial information to be overlaid. The information on financial and clinical outcomes can be understood across the system at a click. Further, the system can be set up to test different pathways, approaches and interventions, to test whether different programmes gain different outcomes for the many Mrs Smiths.

Moreover, over time the SAS approach allows "what if" analysis of which "levers" to pull on the system - would more district nursing really improve outcomes, for example. Or does this pathway versus another provide better quality of care and reduce cost? Finally, this complete view of the care of all the Mrs Smiths enables provider and commissioner alike to build risk-sharing models of care, based on the evidence, akin to the Accountable Care Organisation approach in the USA. SAS is working with these early adopters in generating episode of care and population based costing and risk sharing.

- Model, test and change care pathways and organisational design, based on the evidence - are the interventions working, and why? Then where to act next knowing the impact of interventions
- Marrying this to cost, risk sharing and financial modelling to transform commissioning relationships, as in ACO style models
- All in a single system which can work with every diverse electronic data process in use in the locality.

SAS, the leader in business analytics is the powerful success behind many public and private sector initiatives across the globe. SAS recognises that tackling prevention and intervention should not be one-size-fits all, and offers a modular approach that combines risk and patient insight, operational improvement and better outcomes. Through high-performance analytics, model data sets aim to get more precise insights, and turn data into knowledge faster.

SAS helps health organisations turn data and information into intervention and prevention. With over 30 years' experience in Health across Europe and the USA, SAS enables you to make better evidence-based decisions, and communicate this insight across partners and ultimately to the patient.

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