

# More than a prescription: what is the potential of medicines data?



**Information and technology**  
**for better health and care**

Fintan Grant – Programme Head  
Paul Brown – Clinical Specialist

# There is growing pressure on the NHS drugs bill

People are living longer, more complex and innovative medicines are being developed, and more specialist medicines are being used

**Overall medicines spend in 2016/17**

**£17.4bn**

**Up 33.7% since 2010/11\***



\*Cost in primary care rose by 3.6%, in hospitals rose by 98.3%

# Next steps on the NHS Five Year Forward View

A series of commitments to get the best value out of medicines and pharmacy

## NHS England Medicines Value Programme

Value is... measurable improvement in patient outcomes while maintaining an affordable medicines bill

Making sure patients get access to and choice of the most effective treatments, and the outcomes that matter to them.

Improving the quality (safety, clinical effectiveness, patient experience) of prescribing and medicines use.

# NHS Digital Medicines Data programme

Improving the understanding of the **use, spend, safety and effectiveness** of medicines by providing high quality data



Local and national resources (including clinical) are released from the central extraction, cleansing and manipulation of data

Patient outcomes are enhanced as data leads to optimal use of medicines

Financial savings are maximised in national negotiations with pharma



## Medicines data for secondary uses

Greater understanding of medication safety and ability to measure improvements

NHS providers and commissioners have the data they need to optimise their medicines use and spend

Opportunities for research and innovation that support and develop UK plc

Ability to measure the uptake and benefits of innovation, including personalised medicines

National policy and initiatives (such as antimicrobial resistance) are supported by the data they need

# Current medicines data landscape

## Primary care

## Secondary care

Source of data

NHS Business  
Services Authority

Hospital pharmacy  
stock control  
systems

Electronic  
prescribing  
systems

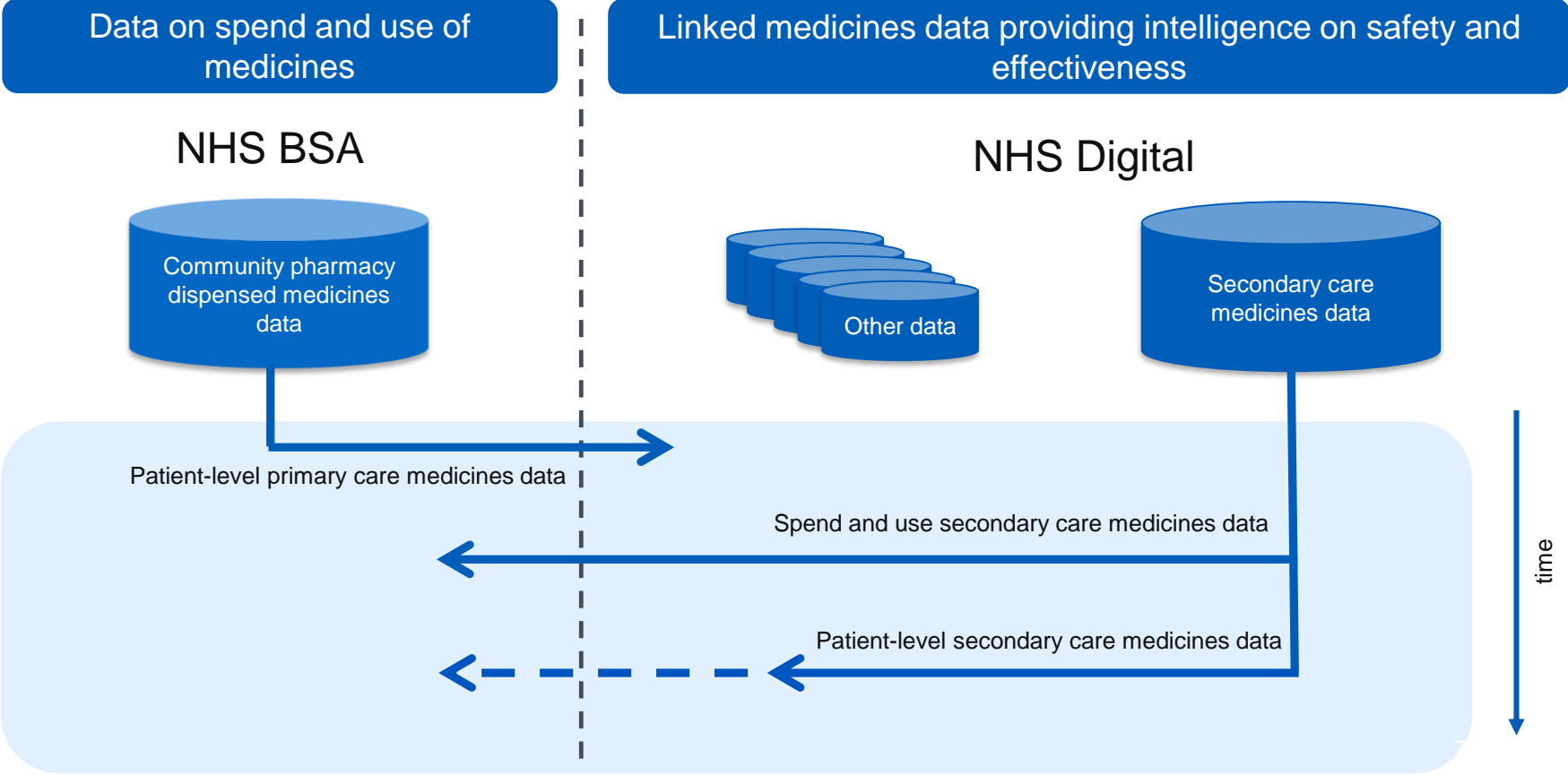
NHS collection available



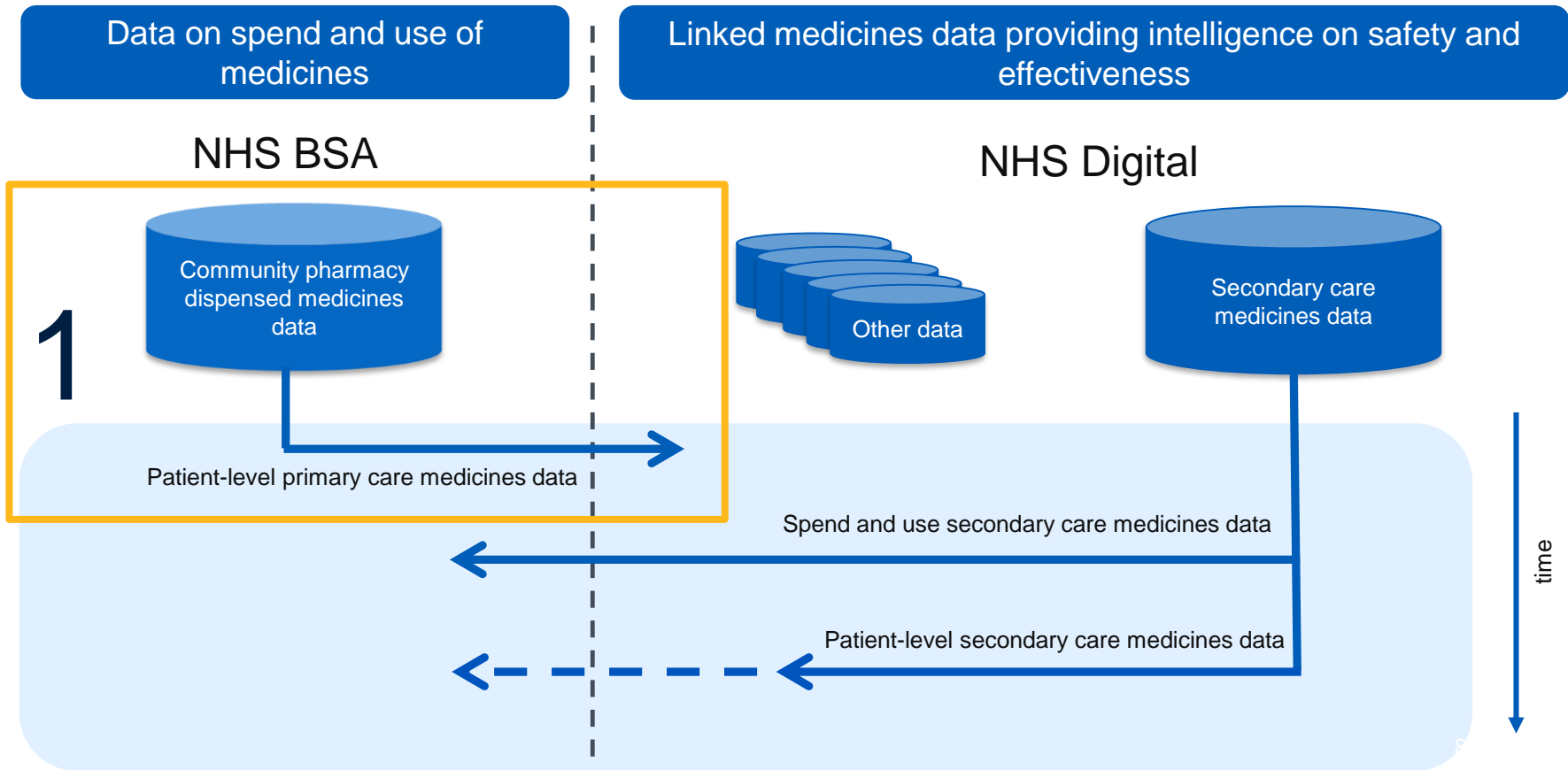
Standardised data



# Blueprint for future medicines data landscape

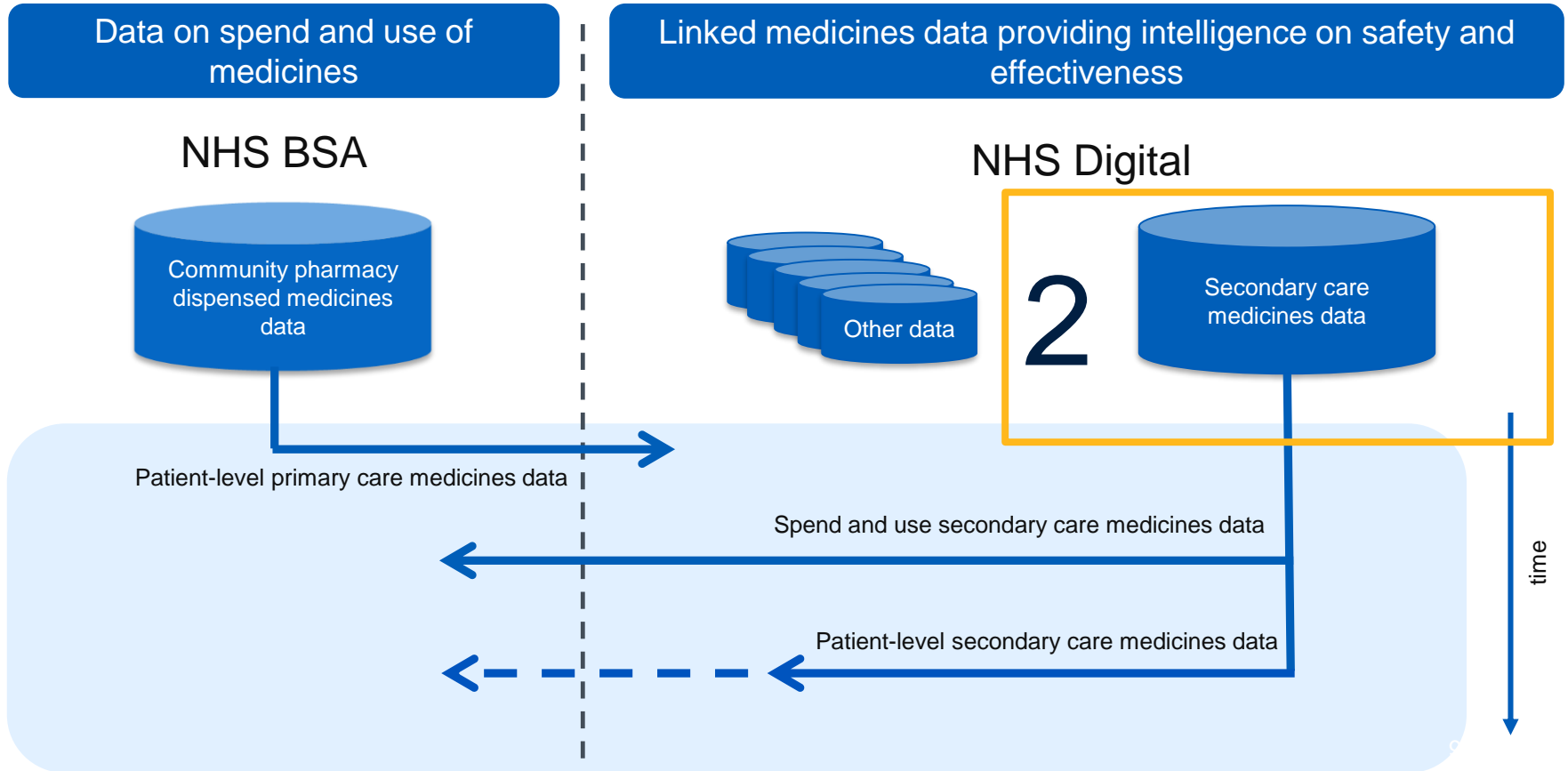


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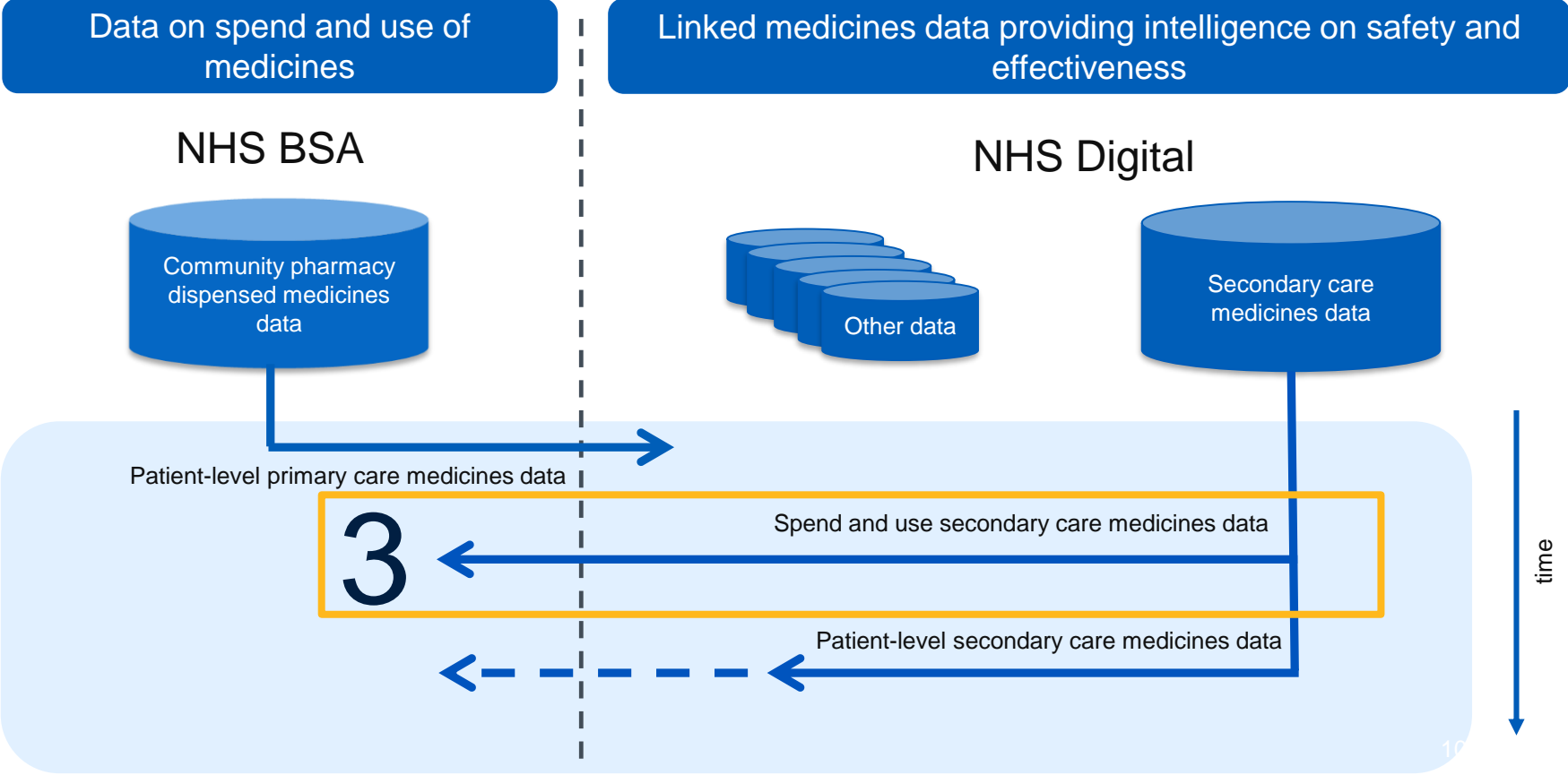




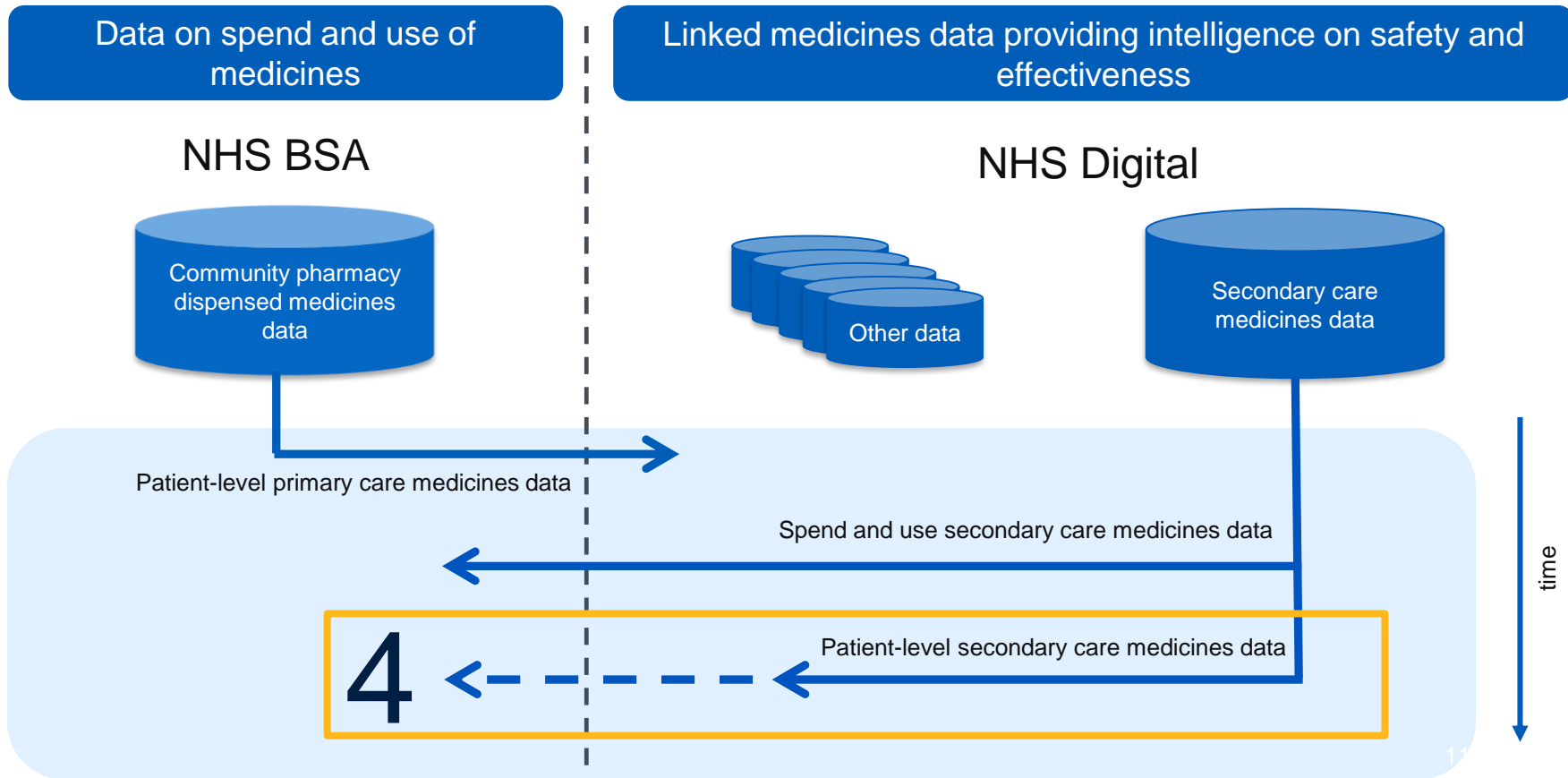
# Blueprint for future medicines data landscape



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# The burden of medication errors

**WHO Global Patient Safety Challenge:** reduce the level of severe, avoidable harm related to medications by 50% globally over five years

**Three early priority actions:** polypharmacy, high risk situations, transfers of care

An estimated 237m medication errors occur in the NHS in England every year

68.3m errors (28% of total) cause moderate or serious harm

The estimated NHS cost of definitely avoidable adverse drug reactions is £98.5m per year, consuming 181,626 bed days, causing 712 deaths, and contributing to 1,708 deaths

# Medicines Safety Programme

Set up following the recommendations of the Short Life Working Group

## 1. Patients

## 2. Medicines

## 3. Healthcare professionals

## 4. Systems and practice

- The accelerated roll-out of hospital e-prescribing and medicines administration systems
- The roll-out of proven interventions in primary care such as PINCER
- The development of a prioritised and comprehensive suite of metrics
- New systems linking prescribing data in primary care to hospital admissions
- New research on medication error to be encouraged

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# Medication safety indicators (phase 1)

- Prescribing that increases the risk of harm and is associated with admission to hospital
  - Not an error
  - Potentially Inappropriate Prescribing (PIP)
- The purpose is to identify hospital admissions that may be associated with prescribing that potentially increase the risk of harm, and to quantify patients at potentially increased risk.

<https://apps.nhsbsa.nhs.uk/MOD/MedicationSafety/atlas.html>



# Medication safety indicators (phase 1)

	Increased risk	Hospital admission
1	Patients 65 years old or over prescribed a non-steroidal anti-inflammatory drug (NSAID) and NOT concurrently prescribed a gastro-protective medicine	GI bleed
2	Patients 18 years old or over prescribed a NSAID and concurrently prescribed an oral anticoagulant (warfarin or a non-vitamin K antagonist oral anticoagulant (NOAC))	GI bleed
3	Patients 18 years old or over prescribed an oral anticoagulant (warfarin or a NOAC) with an anti-platelet and NOT concurrently prescribed a gastro-protective medicine	GI bleed
4	Patients 18 years old or over prescribed aspirin and another anti-platelet and NOT concurrently prescribed a gastro-protective medicine.	GI bleed
5	Patients 18 years old or over concurrently prescribed a NSAID, a renin-angiotensin system (RAS) drug, and a diuretic	Acute kidney injury
6	Composite indicator comprising of unique patients from indicators 1 to 4.	GI bleed

# Headlines (Q4 2017/18)

	Admissions	Number at increased risk	Admission rate per 10,000 at increased risk
1	156	175,425	9
2	33	14,336	23
3	96	30,711	31
4	164	74,711	22
5	89	66,380	13
6	1,693*	674,141 *	25*

\*12 month data

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