MHRA
Regulating Medicines and Medical Devices

Pharmacovigilance: the inside track

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North West Medicines Information Centre

Medicines and Healthcare Products Regulatory Agency

Scope

The MHRA

Pharmacovigilance

The Yellow Card Scheme

International Work

Vaccines and PV

MedSafetyWeek 2021

Pipeline projects

Our vision

We protect and improve the health of millions of people every day through the effective regulation of medicines and medical devices, underpinned by science and research

SoS is the UK Licensing Authority for human medicines
Executive function performed day to day by the
Medicines and Healthcare products Regulatory Agency

What is an Adverse Drug Reaction (ADR)?

- An adverse reaction is a response to a medicine that is noxious (harmful or very unpleasant) and unintended. This includes adverse reactions which arise from:
  - the use of a medicine within the terms of the license
  - the use of a medicine outside the terms of the license, including
    - overdose
    - off-label use
    - misuse or abuse
    - medication errors
  - occupational exposure.

Medication safety in the NHS

At the heart of future NHS challenges

20% of people over 70 years old take five or more medicines. With an ageing population and multiple chronic medical conditions these numbers will just keep increasing

2.5 million **doses of medicines** are administered every year in the average acute hospital

! **215,000** errors

600,000 **non-elective hospital admissions** are due to medicines

70% of these are preventable

5 classes of medicine account for most admissions

- NSAIDs
- Antiplatelets
- Anticoagulants
- Diuretics
- Antihypertensives

1 billion **prescriptions** are issued every year in primary care

! **50 million** prescribing errors

! **400,000 – 33 million** dispensing errors

½ million **inpatient prescriptions** every year in the average acute hospital

! **45,000** prescribing errors with **550** potentially fatal

! **40–100** dispensing errors

2500 **preventable deaths** across all acute hospitals are due to medicines

! **97,000** patients admitted to all acute hospitals suffer from harm due to medicines

97% of medication errors reported to the NHS result in no or low patient harm

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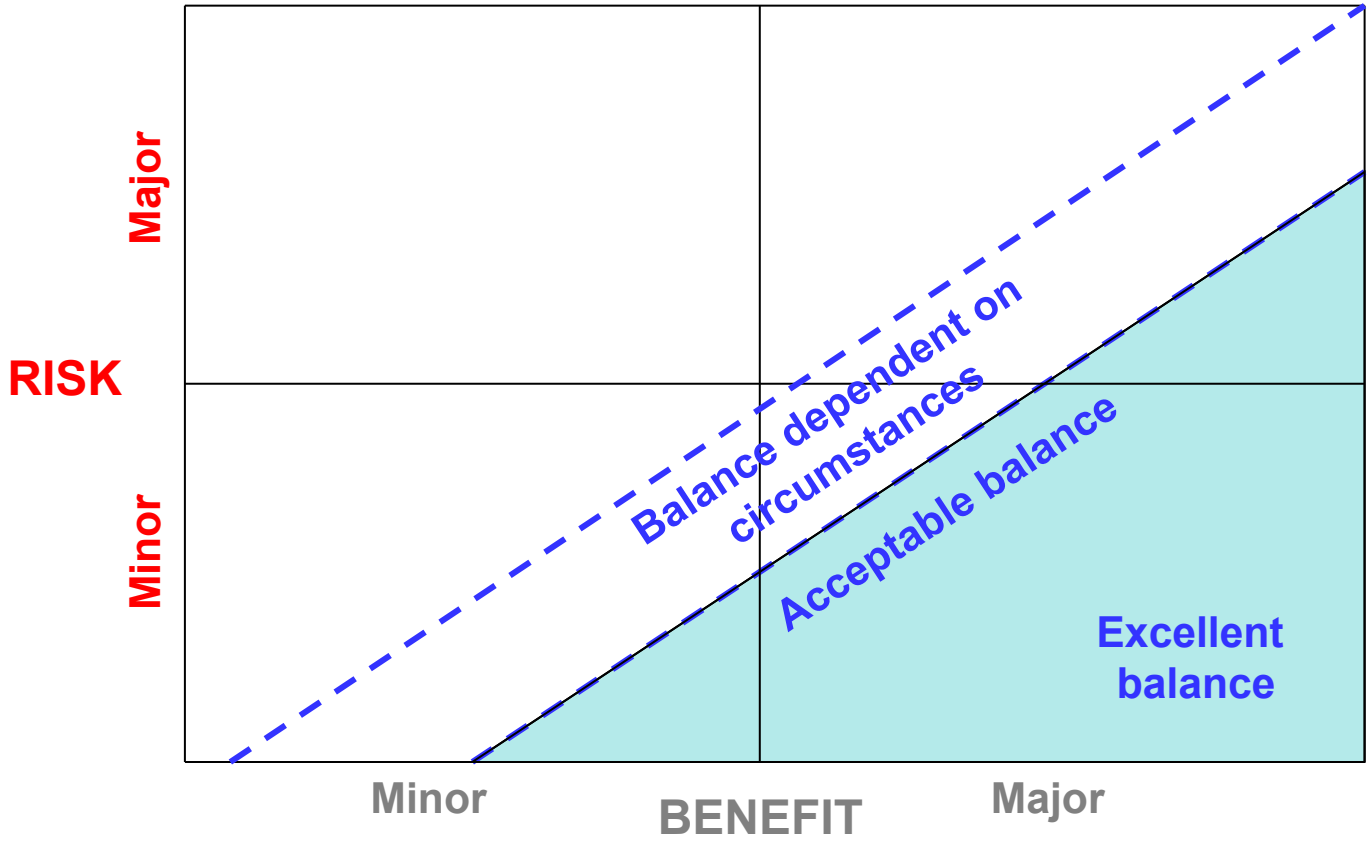
Pharmacovigilance

'No medicinal product is entirely or absolutely safe for all people, in all places, at all times'

- The study of the safety of marketed drugs and response to safety issues
- Carried out in large communities and in practical, clinical use
- Objectives of pharmacovigilance
  - Identify previously unrecognised hazards
  - Evaluate changes in risks and benefits
  - Take action to promote safer drug use
  - Provide optimal information to users
  - Monitor the impact of action taken
  - Audit effectiveness

Risk-benefit balance



The Yellow Card Scheme - Informing risk/benefit assessment

Benefit of treatment

Risk to patient

Bottom line – #patientsafety

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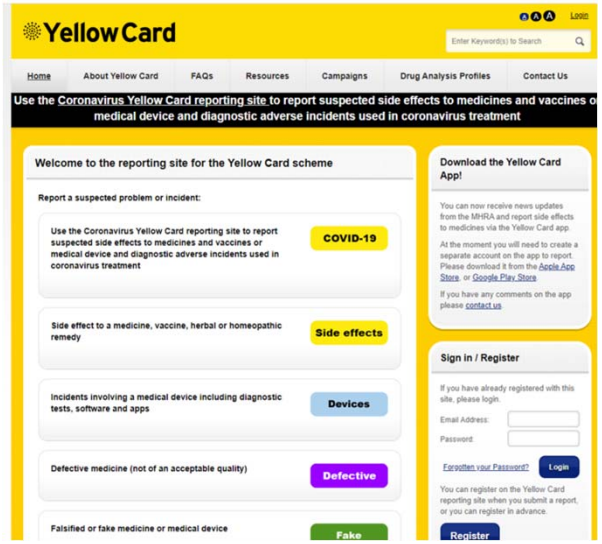
Reporting ADRs - the Yellow Card

www.mhra.gov.uk/yellowcard



Due to pandemic only accepting electronic reporting

Online

YC App

Download from

App store

Google Play

Paper

Patient reporting

Integrated in ePMR systems

Primary care – EMIS, Vision, SystmOne

Secondary care – MiDatabank

Use of APIs?

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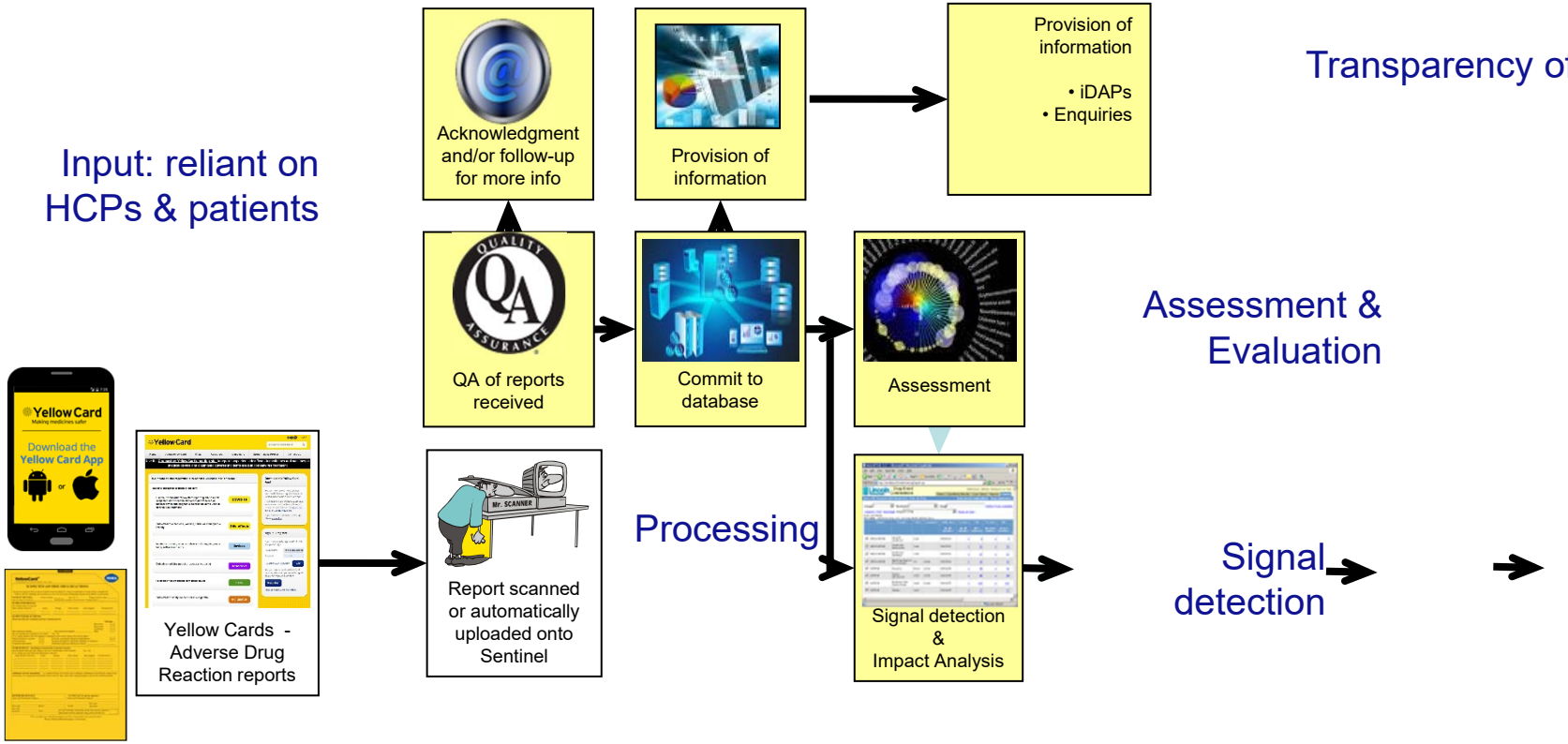
The Lifecycle of a Yellow Card report



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Signal detection & prioritisation process

Signal detection (PRR)

Signal detection meeting

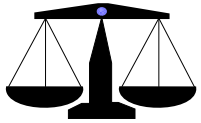
Impact Analysis

&

RPPS

(Regulatory Pharmacoviglance Prioritisation System)

Signal management review meeting



Signal evaluation

Regulatory action

Independent advice from the CHM and its EAGs

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Commission on Human Medicines (CHM) & Scientific Advisory Committees

- CHM role as defined in regulation 10 of the Human Medicines Regulations 2012
  - advise on safety, quality and efficacy of medicines
  - to promote collection and investigation of adverse drug reactions
  - consider applications that lead to Licensing Authority action
  - consider representations made by an applicant or marketing authorisation holder
- Supported by 11 Expert Advisory Groups (EAGs)

Expert Advisory Groups

- Cardiovascular, Diabetes, Renal, Respiratory & Allergy (CDRRAEAG)
- Chemistry, Pharmacy and Standards (CPS)
- Clinical Trials, Biologicals and Vaccines
- Gastroenterology, Rheumatology, Immunology & Dermatology (GRIDEAG)
- Infections (IEAG)
- Medicines for Women's Health (MWHEAG)
- Neurology, Pain and Psychiatry (NPPEAG)
- Oncology and Haematology (OHEAG)
- Paediatric Medicines (PMEAG)
- Patient and Public Engagement (PPEEAG)
- Pharmacovigilance (PEAG)
- & ad hoc Expert Working Groups (e.g. sodium valproate)

Pharmacovigilance Expert Advisory Group (PEAG)

- Advises CHM on the following in relation to human medicines, including herbal products:
  - the public health importance of potential new safety signals
  - the confirmation and quantification of risks identified
  - appropriate risk minimisation measures including communications
  - design and progress of pharmacovigilance plans
  - methodologies for pharmacovigilance.
- To advise the CHM and MHRA on the strategic direction of the Yellow Card Scheme

Options for regulatory action

- No action, investigate, expert advice, or wait for further evidence, continue to monitor periodically
- Strengthen or add changes to product information - variation of the marketing authorisation (usually voluntarily)
  - Limit indications, populations, restriction in use e.g. metformin and renal impairment.
  - Reduction in dose e.g. Tramadol dose.
  - Contraindications, concomitant diseases, interactions, pregnancy e.g. sodium valproate & PPP.
  - Special warnings and precautions e.g. alendronate and other bisphosphonates taken with 200ml water and remaining upright
  - Undesirable effects e.g. new ADRs and further info on listed effects.
- Change in legal status (P to POM)
  - oral diclofenac was reclassified from P to POM due to the risk of CV side effects.
  - Lidocaine-containing teething gels reclassified from GSL to pharmacy (P)

Options for regulatory action

- Label/box warnings
  - Not enough to warn in SmPC; all amphotericin B (severe fungal infections) products to display a clear warning to check the product name and dose (alert prescriber, pharmacist, nurse); fatal overdose if conventional form used at the strength of liposomal form.
- Packsize restrictions
  - To minimise the risk of paracetamol overdose, in 1998, UK legislation restricted the pack size available in pharmacies to 32 tablets (16 tablets outside pharmacy setting)
- Suspension of marketing authorisation
- Revocation of marketing authorisation
  - e.g. lumiracoxib (Prexige) withdrawal due to hepatotoxicity
- Risk Management Plans; safety reviews; renewals; studies (PASS/PAES);

Communicating regulatory action

- Central Alerting System (CAS)
- Updated product information (SmPC, PIL)
- Drug Safety Update (monthly)
- Dear Healthcare Professional letters (Ad hoc)
- Social Media
- Targeted information for patients and working with stakeholders
- Press releases campaigns
- MHRA website and info provision
- iDAPs www.mhra.gov.uk/daps

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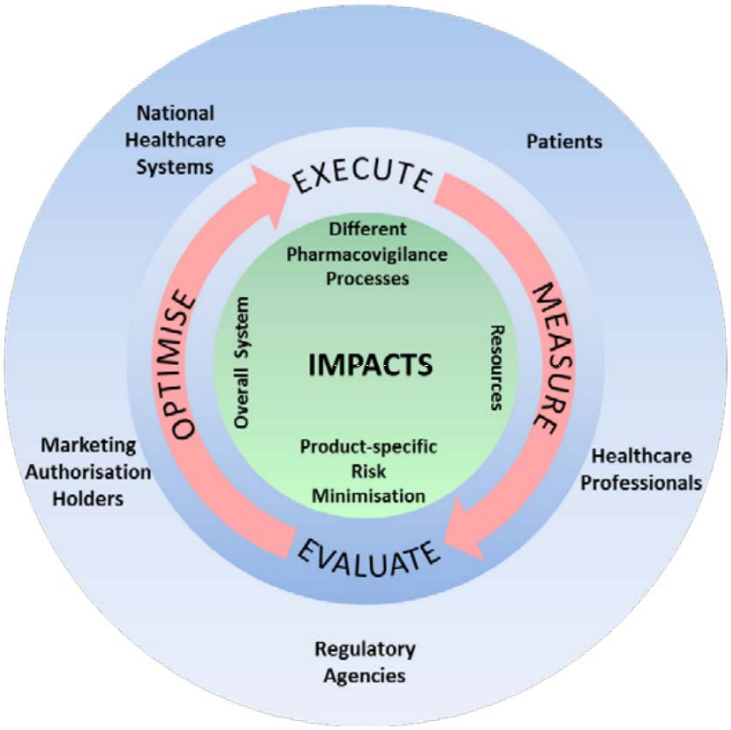
Outcomes of reporting

- About **20-70% of ADRs can be prevented** by ensuring the medicine is taken correctly. All reports from HCPs or patients play a critical role in understanding the benefit-risk for medicines on the market, allowing action to be taken to remove or change prescribing to patients.
- A **third of the reports received in 2015 led to changed advice** to prescribers and patients. Minimising the risks of taking these medicines and leading to improved public health .
- Although annual ADR reporting is increasing, studies estimate the level of **under-reporting is around 90%.** This could be higher for unlicensed medicines.
- Important to **communicate with ALL stakeholders to raise awareness**. The system only works if people are aware
- Important to **measure impact, health outcomes and continually improve PV systems**



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Can ONE report make a difference?

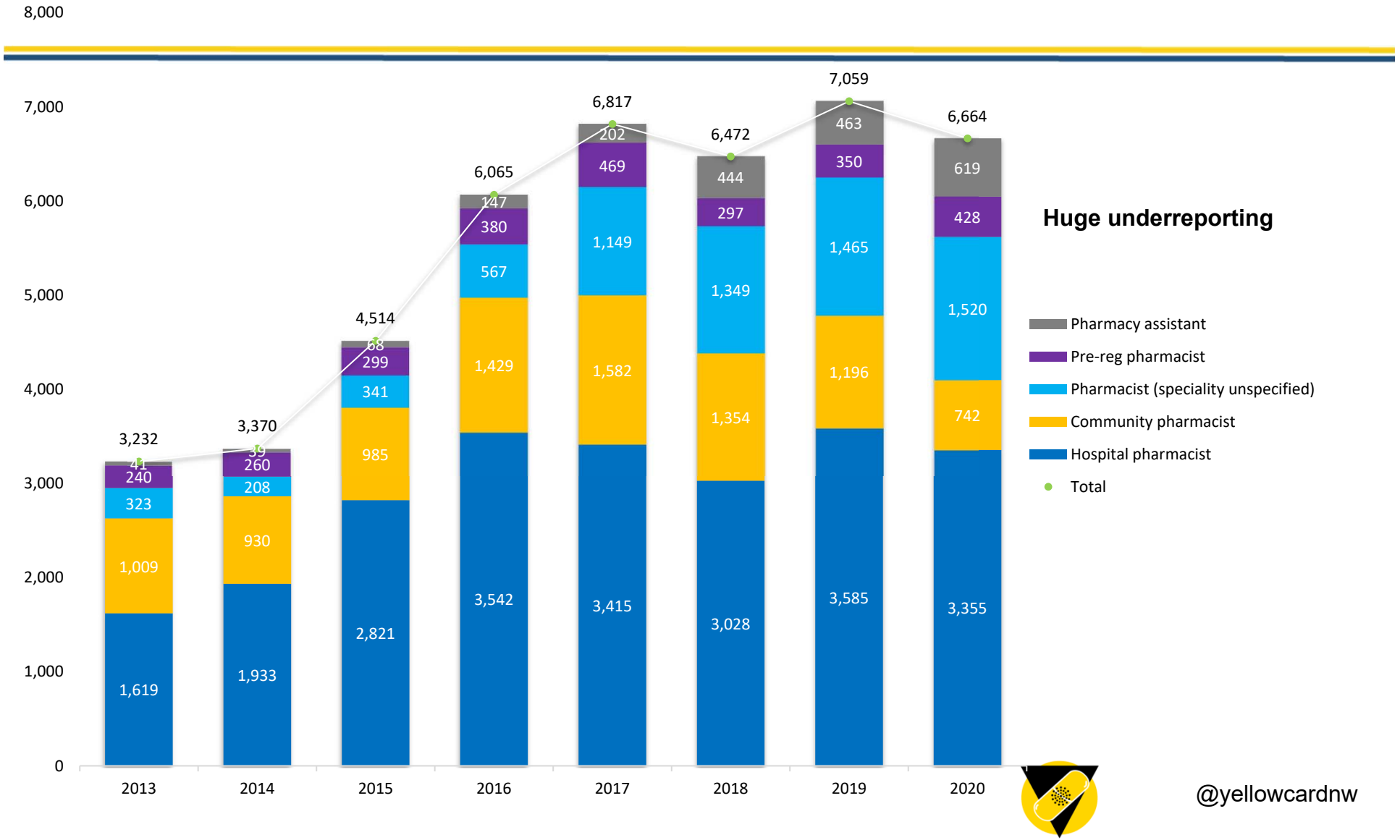
- YES!
- Orciprenaline (Alupent®)
  - 2008 - Single report of serious cardiac ADRs, question on the report

    'Why is this drug still available?'
  - Safety review triggered
  - 2009 - safety review published
    - Risk/benefit no longer positive
    - Planned withdrawal
  - 2010 - withdrawn

Yellow Card reporting more examples …

- A pharmacist report - a 47 year old man on **simvastatin** who was hospitalised for **tendon rupture**. A further 6 reports in the database described tendinopathy. Outcome – 'tendinopathy, sometimes complicated by rupture' added to the product information.
- A pharmacist report - **purple glove syndrome** in a 66 year old female patient on **phenytoin,** reported to the manufacturer , forwarded to Yellow Card Scheme by the company (who have a legal obligation to send reports to the MHRA). The report triggered a review and subsequent addition of PGS to the phenytoin product information.
- A patient report - a 24 year old female reported hair loss on **Yasmin,** this triggered a review of 16 Yellow Card reports, 7 of which were made by patients. **Alopecia** added as an uncommon side effect. Without evidence supplied by patients reporting to the Yellow Card Scheme, this safety signal would have taken longer to be a recognised side effect.

Yellow Cards from pharmacy



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Does it matter if …

- You make a duplicate report
  - No – system picks up, duplicates are good
  - [but never assume someone else will report!]
- You report a reaction that is not an ADR
  - No – all reports are suspicions
- You do not report your suspicions
  - Yes – an important safety signal may be delayed or lost

What's in it for me?

- **You have contributed to patient safety**
  - Maybe your report will be used to inform a new signal investigation
- You have contributed to your Trust's commitment to using medicines safely
- You have fulfilled your professional responsibility
- You have new CPD!

Reporting suspected side effects

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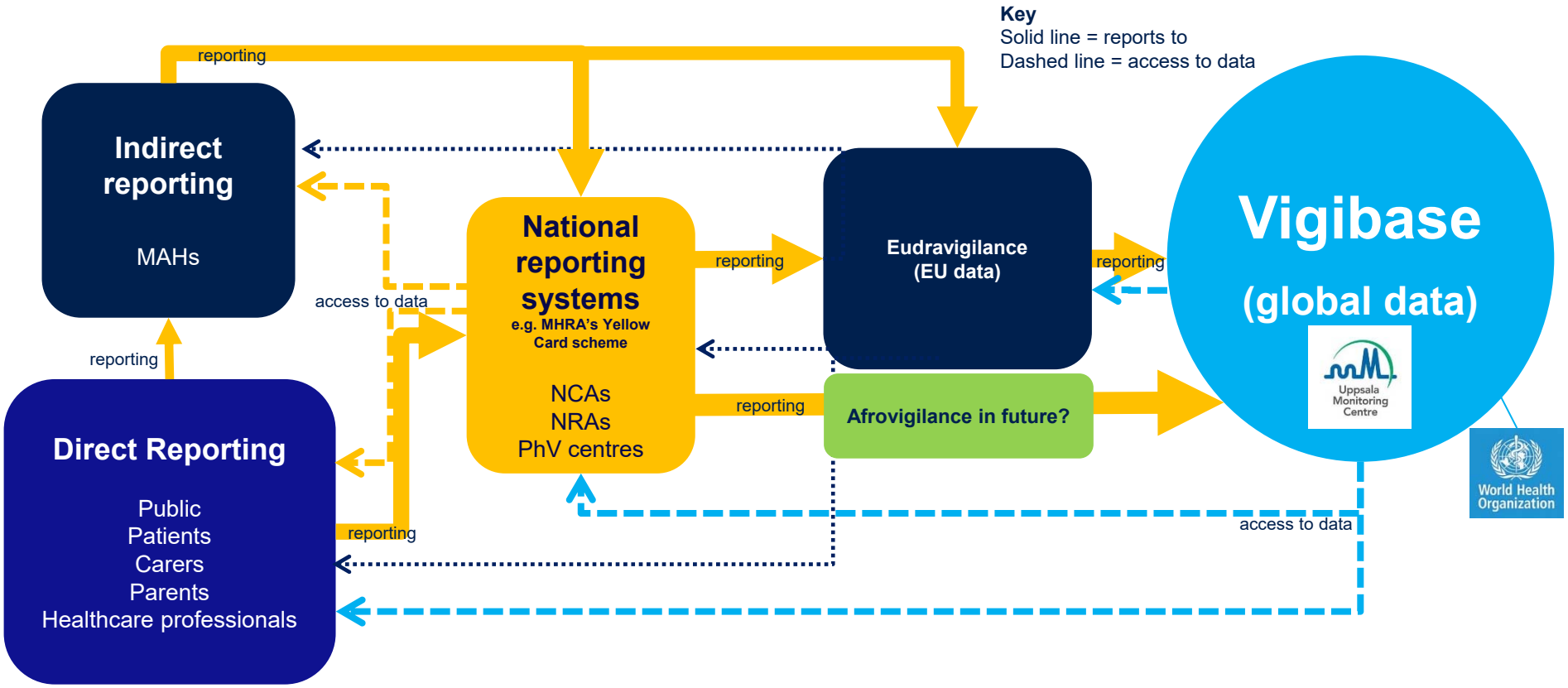
MHRA

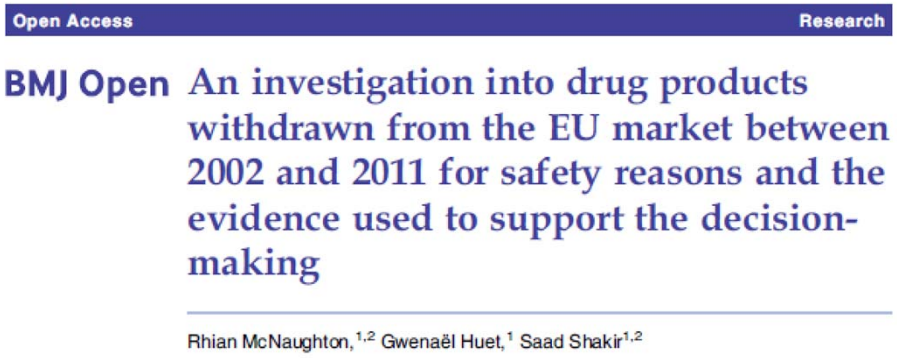
Regulating Medicines and Medical Devices

Medicines and Healthcare Products Regulatory Agency

The global PhV machine & reporting of ICSRs (ADRs)



Nature of evidence



Open Access Research

BMJ Open An investigation into drug products withdrawn from the EU market between 2002 and 2011 for safety reasons and the evidence used to support the decision-making

Rhian McNaughton,[1,2] Gwenaël Huet,[1] Saad Shakir[1,2]

- There is a call for a shift to explore real time data and technology for ADR reporting in PhV and for systems to evolve. However, 18 out of 19 drug withdrawals from EU 2002-11 were based on spontaneous ADR reports
- **'Spontaneous case reporting remains central to pharmacovigilance as it allows for the detection of suspected adverse drug reactions and significant safety signals'**

Table 1 List of drugs withdrawn for safety reasons in all EU member states between 2002 and 2011 grouped by adverse drug reaction or safety concern

Drug name	Drug class or use	Year first marketed	Year of withdrawal	Length of time on market (years)	Adverse reaction or safety concern
Rofecoxib	NSAID (COX-2 inhibitor)	1999	2004	5	Thrombotic events
Clorazepate					fatal side effect
Dextropropoxyphene	Opioid painkiller	~1960	2009	49	Fatal overdose
Nefazodone	Antidepressant	1994	2003	9	Hepatotoxicity
Ximelagatran/ melagatran	Anticoagulant (thrombin inhibitor)	2003	2006	3	Hepatotoxicity
Lumiracoxib	NSAID (COX-2 inhibitor)	2003	2007	4	Hepatotoxicity
Sitaxentan	Antihypertensive (endothelin receptor antagonist)	2006	2010	4	Hepatotoxicity
Bufexamac	NSAID	~1970	2010	40	Contact allergic reactions

EU, European Union; NSAID, non-steroidal anti-inflammatory drug.

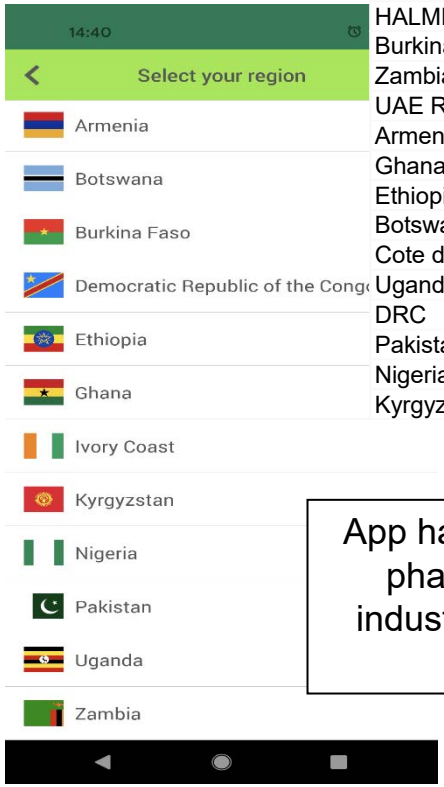
Table 2 List of evidence used to support medicinal product withdrawals in all EU member states between 2002 and 2011 derived from EMA reports, PubMed literature search and websites of competent authorities

Drug name	Case reports	Animal studies	Case–control	Cohort	RCTs	Meta-analysis	*Others
Rofecoxib	X		x	x	x	X	
Thioridazine	X	X	x		x	X	
Valdecoxib	X				x	X	
Rosiglitazone	X		x	x	x	X	
Sibutramine	X				x		x
Orciprenaline	X				x		
Benfluorex	X		x	x	x		
Clobutinol	X	X			x		
Buflomedil	X	X					
Veralipride	X						
Rimonabant	X				x	X	
Carisoprodol	X	X		x	x		x
Acepromazine+Acepromazine +Clorazepate	X						x
Dextropropoxyphene	X						x
Nefazodone	X						x
Ximelagatran/melagatran					x		
Lumiracoxib	X				x		
Sitaxentan	X	X					
Bufexamac	X	X					x

*Other studies include non-randomised and/or not controlled clinical trials and incidence studies.
EMA, European Medicines Agency; EU, European Union.

Adoption of ‘MedSafety app’

- Backend capability enables rapid adoption by new partners
- Customisation and management is easy.
- Countries initially supported by the WHO through their capacity building activities
- Opportunity for rapid deployment in health crisis situations
  - Branded for national context
  - Drug lists embedded i.e. WHO-Drug
  - MedDRA embedded
  - Can use free text
  - News feeds from national context
  - ADR data from national context
  - Connected to Vigibase & data access
  - Can also include other products/incidents



Yellow Card (UK)	15/07/2015
LAREB (Netherlands)	29/01/2016
HALMED (Croatia)	18/05/2016
Burkina Faso	15/06/2017
Zambia	29/06/2017
UAE RADR (UAE)	30/01/2019
Armenia	07/05/2019
Ghana	25/06/2019
Ethiopia	23/08/2019
Botswana	14/11/2019
Cote d'Ivoire	17/12/2019
Uganda	26/02/2020
DRC	14/04/2020
Pakistan	02/11/2020
Nigeria	04/11/2020
Kyrgyzstan	23/11/2020

App has potential for pharmaceutical industry adaptation too

Medicines & Healthcare products Regulatory Agency

Uppsala Monitoring Centre
– Building a global safety culture

HMA
Heads of Medicines Agencies

ICMRA
International Coalition of Medicines Regulatory Authorities

What is #MedSafetyWeek?

- Began with **adverse drug reaction (ADR) awareness week** social media campaign across EU led by MHRA
- Now an international and annual social media campaign to raise awareness of adverse drug reactions and national reporting systems; like the Yellow Card Scheme that operates across the UK
- **#MedSafetyWeek 2021 is the sixth annual campaign on social media**

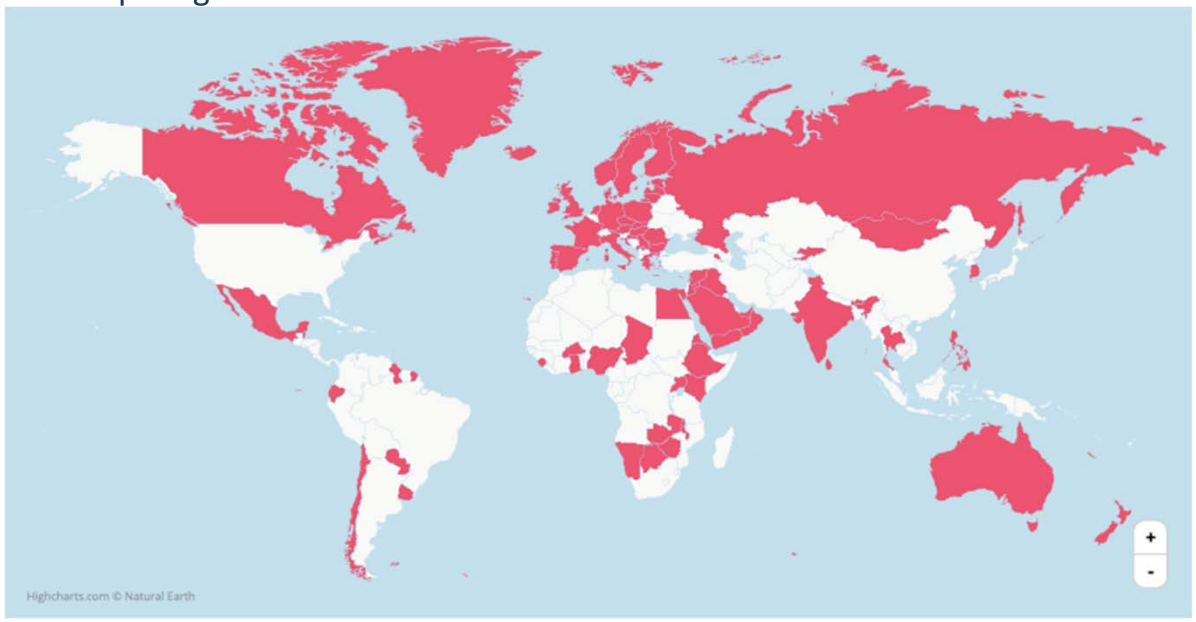
- Medicines regulators across **64 countries** are participating, 6 supporting organisations, 41 languages!
- **Dates: 1-7 November 2021**
- **Theme: Vaccines**
- **Always use the #medsafetyweek hashtag – it helps us measure.**
- **Others to also use are: #MHRAyellowcard #patientsafety #vaccinesafety**
- UMC plus project team with regulators from: UK, Ghana, Ireland, ISoP Egypt Chapter
- Get in touch with your local MSOs or YCC to joint them in raising Yellow Card awareness

Project team

MSW 2020 in numbers – a global campaign

- **Over 75 countries** took part last year.
- Our messages reached **over 140 million people**
- included tweets by the WHO and the UN

Participating countries in 2020



76 medicines regulators

10 supporting organisations

45 languages

Participating countries in 2021

Participants

Medicines agencies

Albania, Algeria, Armenia, Australia, Barbados, Belgium, Bhutan, Botswana, Brunei, Bulgaria, Cape Verde, Chile, Croatia, Cyprus, Czech Republic, Denmark, Egypt, El Salvador, Eritrea, Estonia, Ethiopia, Finland, Georgia, Germany, Ghana, Greece, Honduras, Iceland, India, Iraq, Ireland, Italy, Jamaica, Kenya, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Mexico, Moldova, Montenegro, Namibia, Netherlands, New Zealand, Niger, Oman, Pakistan, Panama, Paraguay, Philippines, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, South Africa, Sri Lanka, Syria, Thailand, United Kingdom, United States, Zambia

Other organisations

- Asociación Colombiana de Farmacovigilancia
- Caribbean Public Health Agency
- European Medicines Agency
- International Society of Pharmacovigilance
- ISoP Egypt Chapter
- Pan American Health Organisation

What do we want to say?

- **General message**
  - **Vaccines are the most effective way to prevent infectious diseases and they save millions of lives worldwide.**
  - **Like all medicines, vaccines can cause side effects.**
  - **Report suspected side effects – it helps make vaccines better for everyone.**

- **Secondary messages**
  - Every report counts and your report matters.
  - Importance of reporting brand and batch numbers
  - You can report suspected side effects to the Yellow Card scheme to medicines also.
  - With patients, discuss side effects and what to do including how to report themselves using the Yellow Card scheme.
  - If you're concerned your health, speak to your healthcare professional.

New social media assets

Patient reporting

HCP reporting

Value of reporting

Social media cards

E-mail signature

What can you and your organisation do?

1. Do you **follow MHRA on their social media channels**? Get connected to the MHRA social media channels and look out for the ADR awareness campaign in November
2. Help raise awareness by showing your support through **retweeting, commenting, liking, and sharing campaign material** with your social media contacts.
3. Get involved with the awareness week **- encourage greater dialogue between your colleagues, patients and organisations you deal with** about the importance of reporting suspected ARs. Engage locally with your one of our 5 regional Yellow Card Centres or MSO**. Work with local immunisation teams and stakeholders**
4. **Link to materials on organisational pages:** resources page and campaign tabs, Drug Safety Update, e-learning modules and Yellow Card guidance for HCPs: https://www.gov.uk/guidance/the-yellow-card-scheme-guidance-for-healthcare-professionals
5. **Email signature banner**

Right click to save the image and use locally

6. **Don't wait to report any safety issues, especially suspected adverse drug reactions to the Yellow Card Scheme**.

MHRA website will contain a **library of downloadable assets** from previous and current campaigns. 3 new animations will be added that MSW: **https://yellowcard.mhra.gov.uk/campaigns/**

Mitul Jadeja, MHRA

https://yellowcard.mhra.gov.uk/campaigns/

Consider using infographics: Campaigns tab of the Yellow Card website

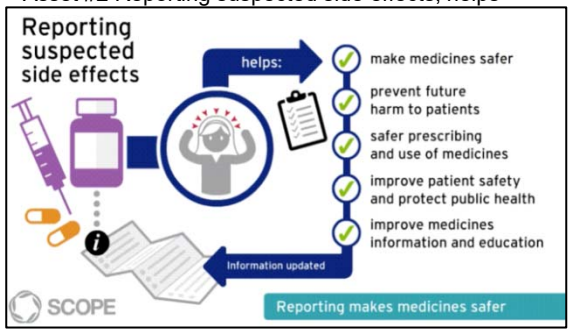
Asset #1 Animation

www.youtube.com/watch?v=3et5LdYLc8M&feature=youtu.be

Patient waiting area video downloadable here for those using Jayex

http://www.medextranet.com/categories/awareness-campaigns.html

Asset #2 Reporting suspected side effects, helps



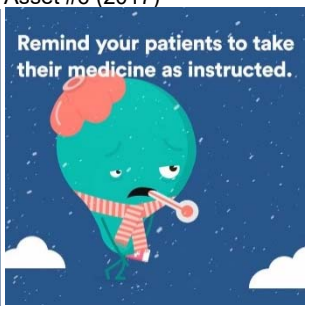
Click image above for example animation (need to be connected to internet)

Asset #3 Suspected side effect? Report

Asset #4 (2017)

Asset #5 (2017)

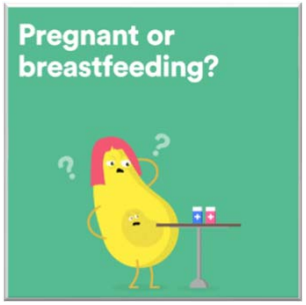
Asset #6 (2017)



Click image above for example animation (need to be connected to internet)

Asset #7 (2018)

Asset #8 (2018)



Asset #9 (2018)

Click image above for example animation (need to be connected to internet)

Asset #10 (2019)

Asset #11 (2019)

Asset #12 (2019)

Asset #13-17 (2020)

View sample videos at bit.ly/MSWvideos

#MedSafetyWeek use videos on YouTube Channel

- Every Report Counts to showing the impact of reporting

https://youtu.be/9SzUNbmEtlU

Professional Education

https://vaccine-safety-training.org/vaccine-pharmacovigilance.html

- Online e-learning materials on ADR modules
- All CPD accredited
- Be good to promote these during MedSafetyWeek
- Good practice to incorporate within induction training for new staff

https://www.gov.uk/guidance/the-yellow-card-scheme-guidance-for-healthcare-professionals#further-guidance-and-online-learning

WHO module

- https://vaccine-safety-training.org/vaccine-pharmacovigilance.html

Use this crib sheet to help complete a Yellow Card if you suspect an adverse drug reaction (ADR)

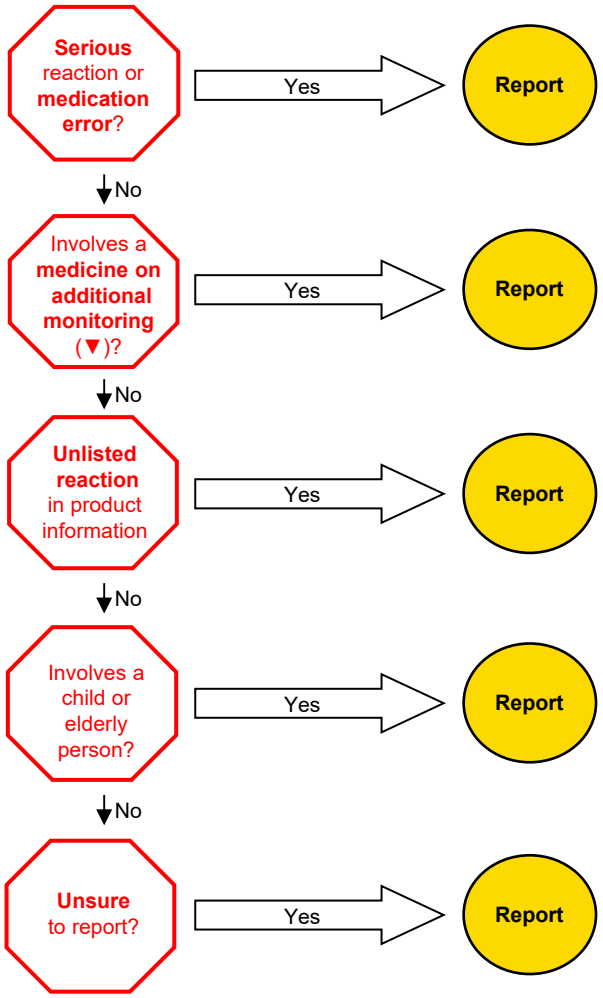
Yellow Card

Adverse **D**rug **R**eaction **suspected**?

Report it via a Yellow Card

mhra.gov.uk/yellowcard or via the App

Do you suspect an adverse drug reaction?



The minimum information needed for completing a Yellow Card:	Additional information to supply (this information helps assess the Yellow Card):
Names of the medicine(s) suspected to have caused the reaction	Details of the suspect medicine(s) if available. For example; ✓dose ✓start and stop dates ✓route of administration ✓**Batch numbers especially for vaccines, biosimilars and biological medicines** ✓action taken with the drug - stopped, dose change, restarted, none etc.
Suspected reaction(s)	Details of the reactions if available: ✓a brief description of reaction ✓diagnosis if relevant ✓start and stop dates of reaction ✓seriousness (use tick boxes on Yellow Card) ✓treatment given ✓reaction outcome
At least one patient identifier: ✓ Sex ✓ Age ✓ Weight ✓ initials ✓ local identifier All should be completed if available	Any additional information you have: ✓relevant medical history ✓test results ✓other drugs taken in the last 3 months ✓if any rechallenge was performed ✓If it is a congenital abnormality, state all other drugs taken during pregnancy and date of last menstrual period **If no further information is available, please indicate this on the Yellow Card**
Reporter details: Include your name, qualification and full address	

Yellow Card
Making medicines safer

A side effect to a medicine?

Anyone can report suspected side effects using the Yellow Card Scheme.

Visit:
mhra.gov.uk/yellowcard
or use the free app. For paper forms call: 0808 100 3352.

If you are worried about your health speak to a healthcare professional.

Medicines & Healthcare products Regulatory Agency

Did you know? You can now tell us about suspected side effects on the move via the **MHRA's Yellow Card mobile app**

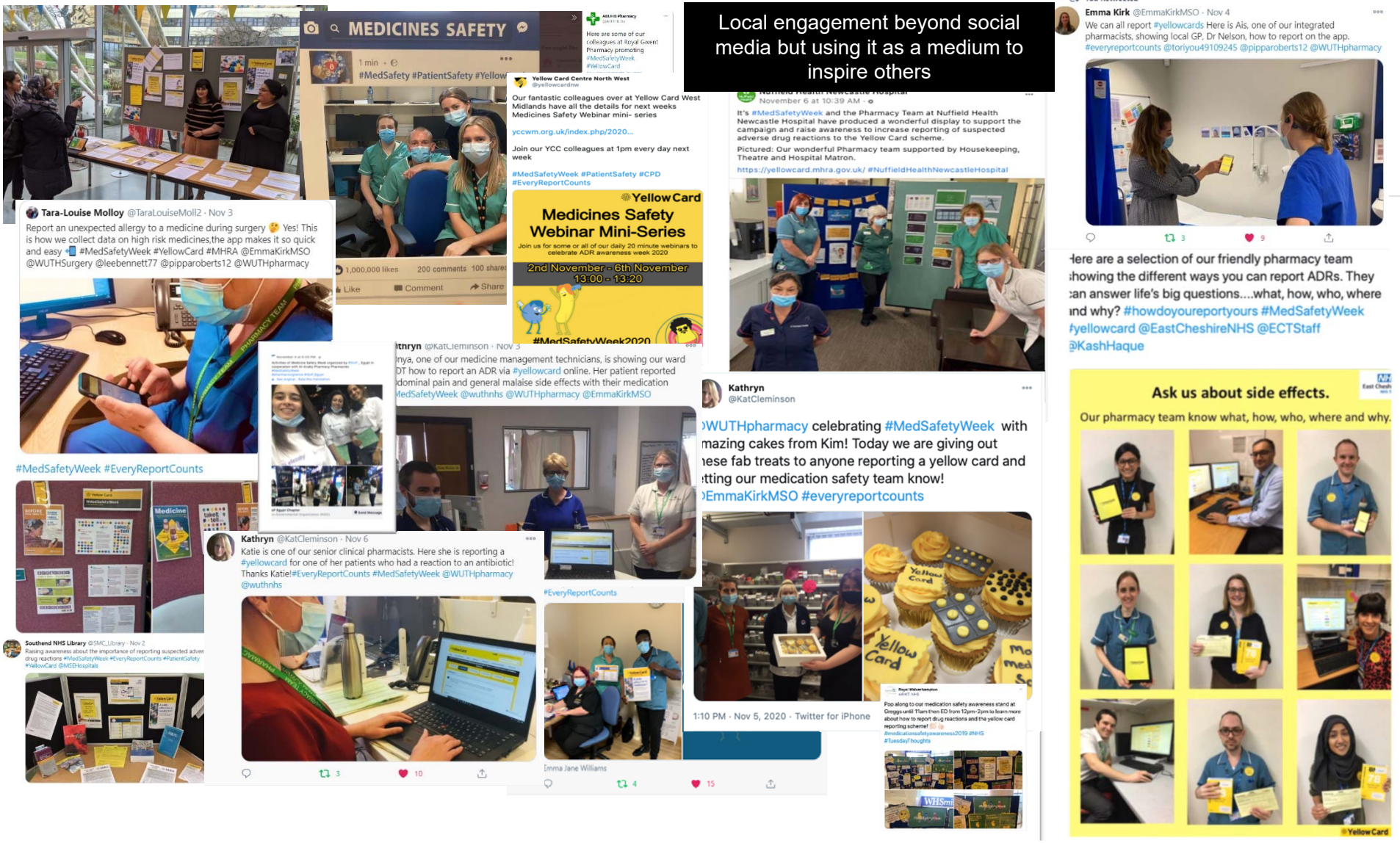
Medicines & Healthcare products Regulatory Agency

For more information about the Yellow Card Scheme or to report suspected side effects online visit:

mhra.gov.uk/yellowcard

Engage people beyond social media

Local engagement beyond social media but using it as a medium to inspire others



Biobank Overview

What is it?

Yellow Card is the MHRA's scheme for public and healthcare professionals to **report side effects** to drugs and vaccines

The Biobank would collect and sequence **DNA samples** for a 'watchlist' of research topics to establish if specific **genetic variants** can **predispose** individuals to a certain side effect to a drug

Participants' **Electronic Health Records** and other **relevant data** would be collected to support the research

Ultimate aim is to support development of **genetic tests** to be used prior to prescription

External researchers (academia, industry etc) could apply to **access anonymised data** or **add their own topic** to the watchlist

Why is it important?

1 in 15 hospital admissions are due to side effects and they account for **197,000 deaths** across Europe annually

Expands the utility of the existing Yellow Card database to generate **more insight on the safety profiles** of medicines and vaccines

Research will supporting tailoring of prescriptions to patients to enable **'personalised healthcare'**

Involvement from other researchers to contribute to and benefit from the Biobank will **strengthen the reach and impact** of the research

Output **data will be shared** with international pharmacogenomic groups, consortia and databases

What are we doing?

12 month scoping project funded by UK Office for Life Sciences to work out:

- Target operating model for YC Biobank
- Potential for collaborations
- Projected cost and plan for pilot
- Funding sources
- Plan for research and industry access

Ongoing **engagement** with patients, public, healthcare professionals, academia, healthcare organisations, biobanks and industry to shape our proposals

Final proposals to be delivered in **January 2022** with interim report in July 2021

Will start **funding applications** through second half of 2021 - ongoing

Healthcare professional virtual workshop

We are keen to hear your views on the initiative to discuss potential healthcare professional involvement as our plans continue to develop

Thursday 21st October 2021 at 13.00 via Zoom

Event agenda

1. Pharmacogenomics in healthcare today
2. Introduction to the Yellow Card Biobank plans
3. Discussion topics:
   - participant contact and recruitment
   - sample and data collection
   - how you could support the biobank and how the biobank could support you

If you'd like to hear more about the initiative or the event, please get in touch at YellowCardBiobank@mhra.gov.uk

Click here to register

https://www.eventbrite.co.uk/e/yellow-card-biobank-a-virtual-workshop-for-healthcare-professionals-tickets-169323688711

Vaccines: special considerations

Situation	Vaccines	Medicines
Who?	Usually healthy people Often most of the population	Those with diseases or medical conditions
How?	Public health programmes	By doctor or pharmacist
Why?	To prevent disease	To treat, manage or prevent disease
When?	In childhood, disease outbreaks, seasonal, or travel	At time of illness
How many?	Around 8-15 in childhood	Thousands of medicines
Adverse events	Low acceptance of risk – may lead to vaccine hesitancy	Adverse events may be more acceptable depending on severity of disease or availability of treatments

GVSI Blueprint objective 3: “develop vaccine safety communication plans at country level, to promote awareness of vaccine risks and benefits, understand the perception of the risk and prepare for managing any adverse events and concerns about vaccine safety promptly

Vaccine PhV needs special consideration

- Pharmacovigilance and Risk Management Planning for vaccine requires an understanding of the **biological nature of vaccines and how it is given need specific considerations for risk/benefit evaluation**. Real time surveillance often uses multiple sources of data including epidemiological data.

- An understanding of mass national immunisation programmes and the differential impact on the safety profile is essential.

– Risk Management should be planned well in advance, be proactive and tailored, with anticipation of future issues.

– **Communications** should be balanced, taking account of the variety of stakeholders in vaccine safety. Rumours and vaccine hesitancy can derail and have a damaging role.

HMA
Heads of Medicines Agencies

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

9 December 2013
EMA/488220/2012 Corr*

Guideline on good pharmacovigilance practices (GVP)
Product- or Population-Specific Considerations I: Vaccines for prophylaxis against infectious diseases

Incidents

- Tuberculosis following oral BCG
- Polio following IPV
- H1N1 immunization and GBS, Narcolepsy

Safety issues

- Programme errors
- Anaphylaxis
- Vaccine associated paralytic polio (VAPP)
- Disseminated BCG disease

Rumours, bad science and mass hysteria

- Pertussis vaccine coverage in the UK
- MS and hepatitis B vaccine in France
- OPV and chronic diseases in Nigeria
- Thiomersal and neuro-developmental disorders

Vaccines
Who are the stakeholders in communications?

Decision-makers

Regulatory authorities

Public health authorities

National immunisation committees

National advisory committees on AEFI

Health technology assessment bodies

Ministries of health

Politicians

Vaccine users

Representatives of vaccine target populations, vaccinees, parents, carers and the community, including anti-vaccine groups, citizen watchdogs

Representatives from HCPs, HCP associations, learned societies

Other collaborators

Vaccine manufacturers

Media representatives and journalists

Non-governmental organisations

Technical development agencies

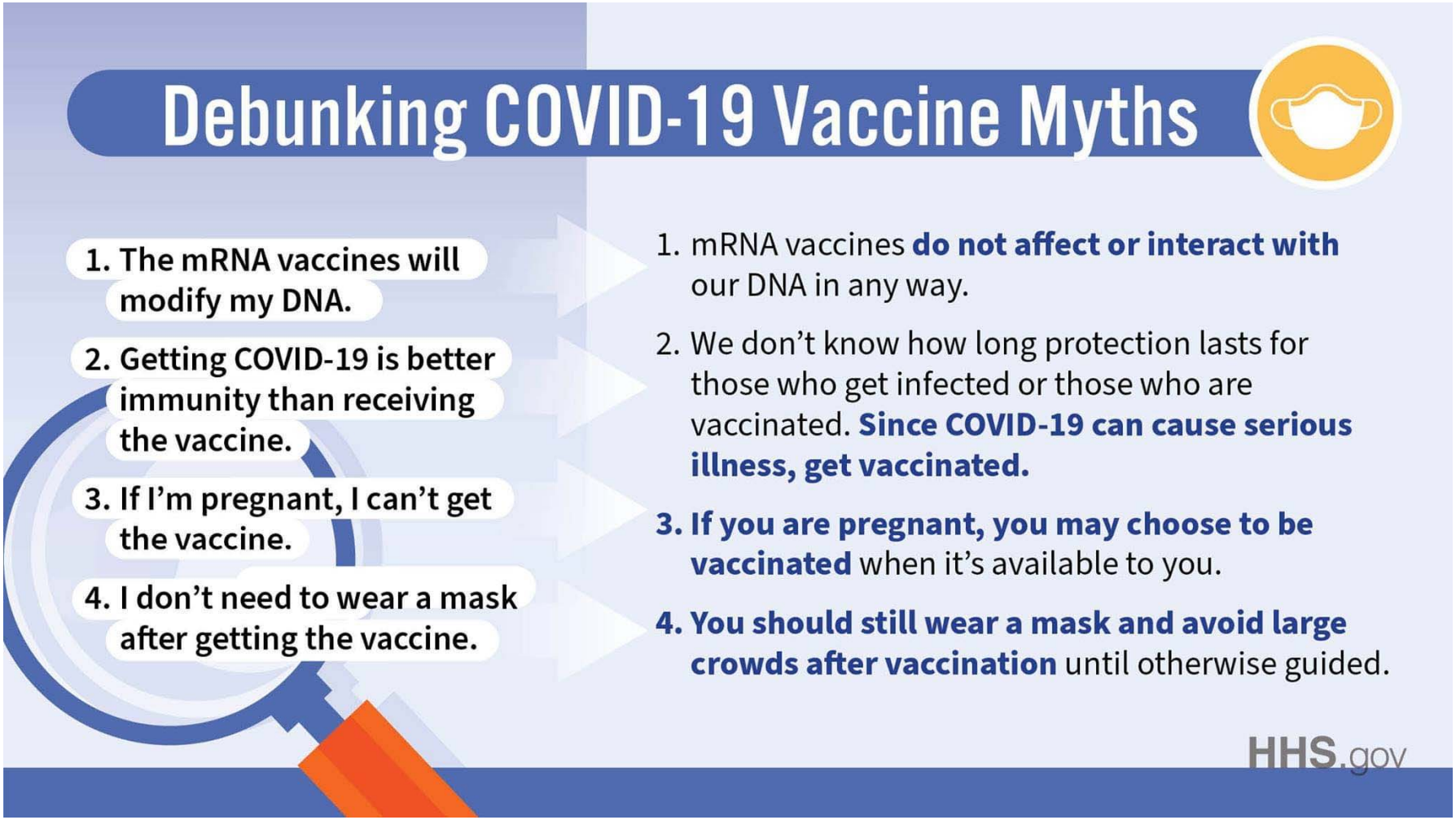
Multilateral agencies, e.g. WHO and GACVS, UNICEF

Other parties

Religious and community/public opinion leaders, including e.g. teachers

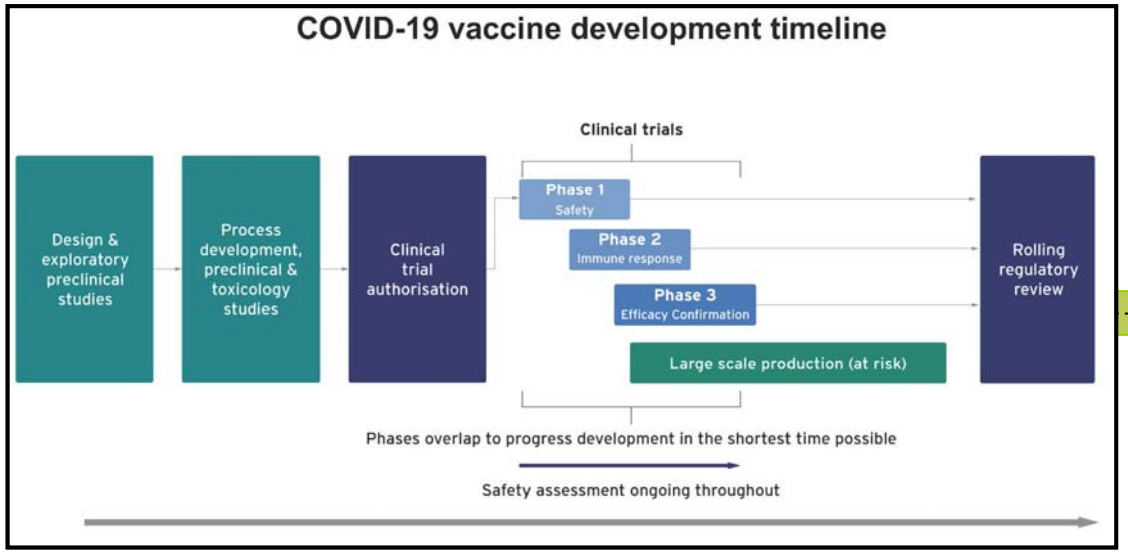
Donors and procurement agencies

Special considerations for vaccines: rumour, misinformation and disinformation



High level overview of the drug development process

Safety, Effectiveness and Quality to robust international standards



Monitoring

Phase IV

Pharmacovigilance

Spontaneous ADR reporting;

Benefit Risk Management;

Safety variations;

Renewals of marketing authorisations;

Reclassification;

Regulation of product information and advertising.

Inspection, Enforcement & Standards

VRMM

E-Cigarettes

MHRA regulates medicines and medical devices, ensures they work and are acceptably safe; focuses on core activities of product licensing, inspection and enforcement, and pharmacovigilance

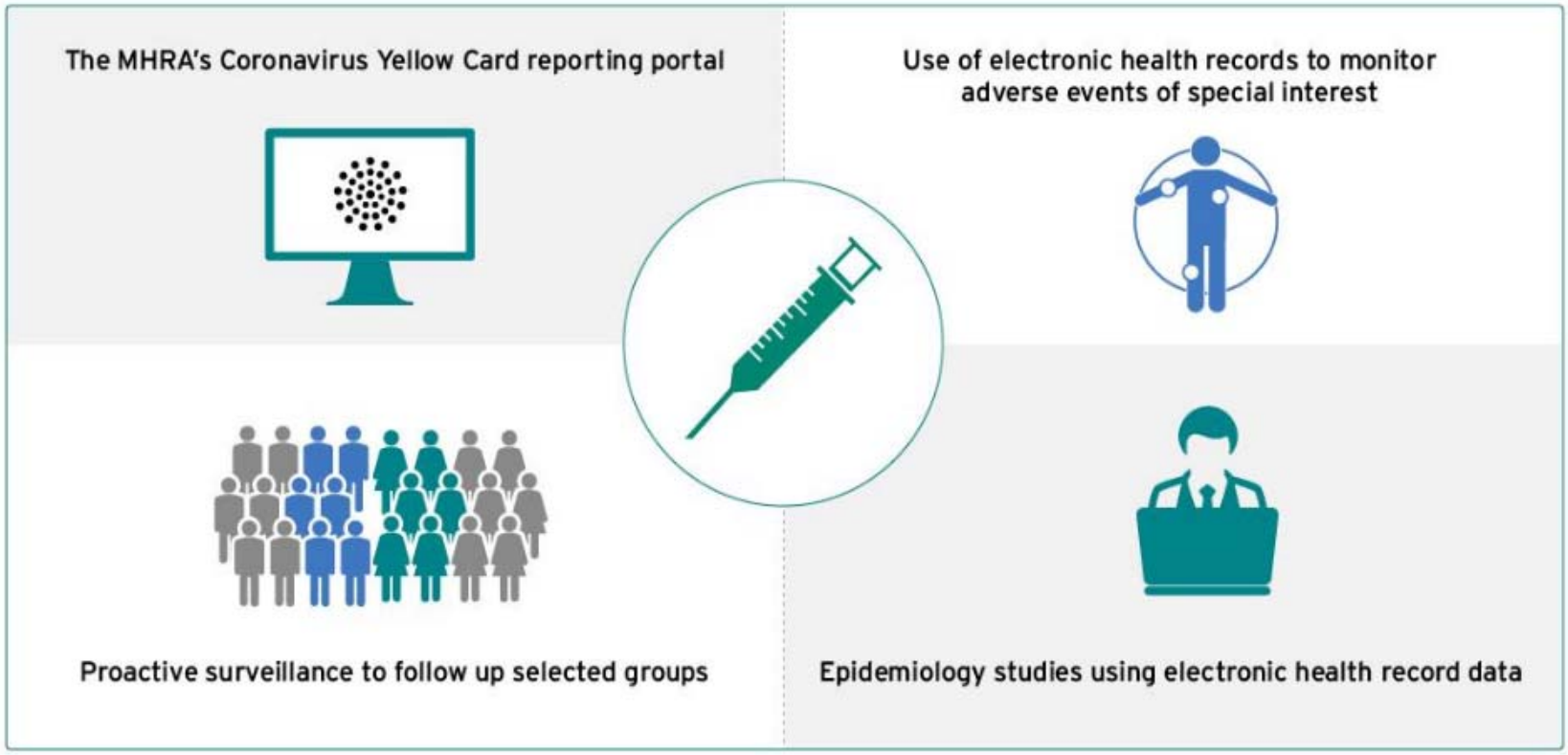
COVID-19 Vaccine pharmacovigilance

- Two main aims
  - to rapidly detect, confirm, characterise and quantify any new risks that were not detected in clinical trials, to weigh these against the expected benefits and take any necessary action to minimise risks to individuals.
  - to be able to very quickly established if any serious events which are temporally-related to vaccination are merely a coincidental association, and to do this in a robust, evidence-based way so that public confidence in a vaccine is not eroded unnecessarily.

MHRA

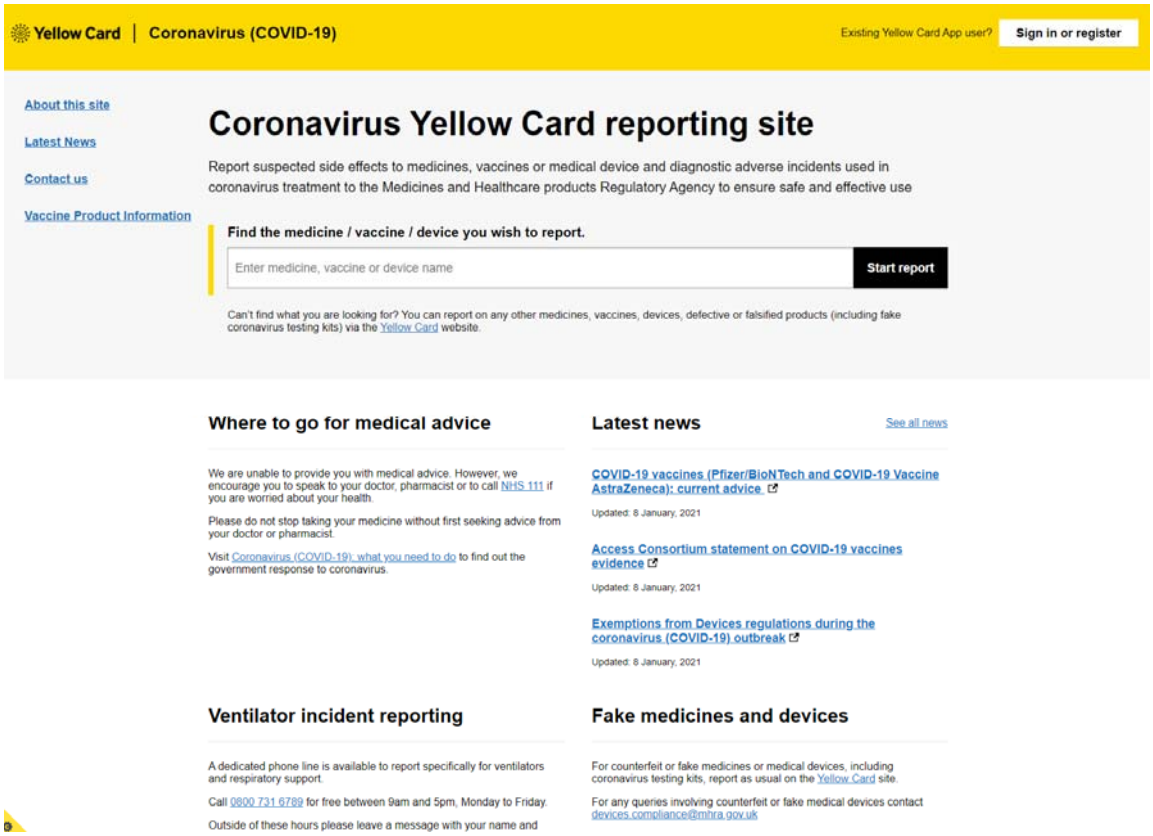
Medicines & Healthcare products Regulatory Agency

Surveillance strategy



https://www.gov.uk/government/publications/covid-19-vaccine-surveillance-strategy

- https://coronavirus-yellowcard.mhra.gov.uk/ or use the app

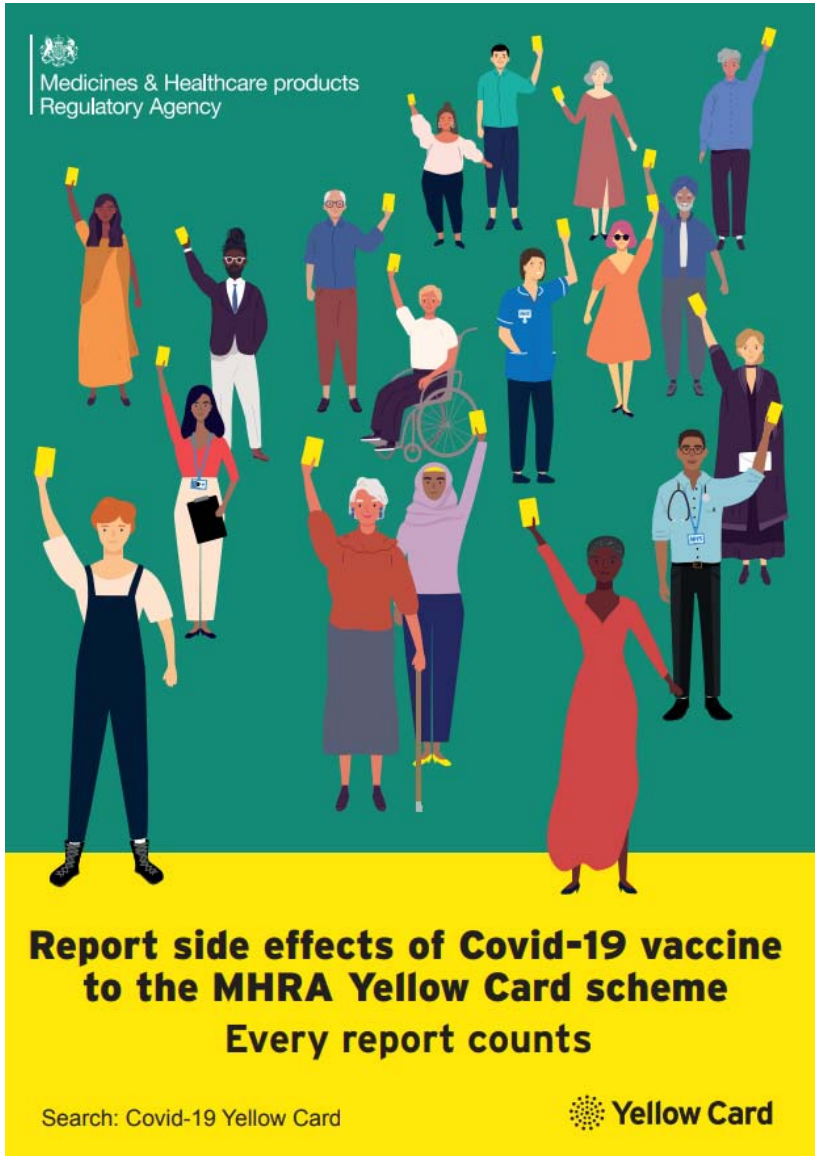


- Weekly publication on ADR data on MHRA website
- Comms campaign e-toolkit available on Coronavirus Yellow Card website
- Developed at pace
- Additional questions on reporting form added as well as follow up q's for TE+TP events when reported
- Detailed review and full safety review of each case
- Working with haematology community, PHE, CHM, other regulators globally, etc
- Advice from independent CHM & EWGs for regulatory position

It is crucial healthcare professionals keep reporting non Covid-19 related suspected adverse drug reactions to the Yellow Card scheme or via the app

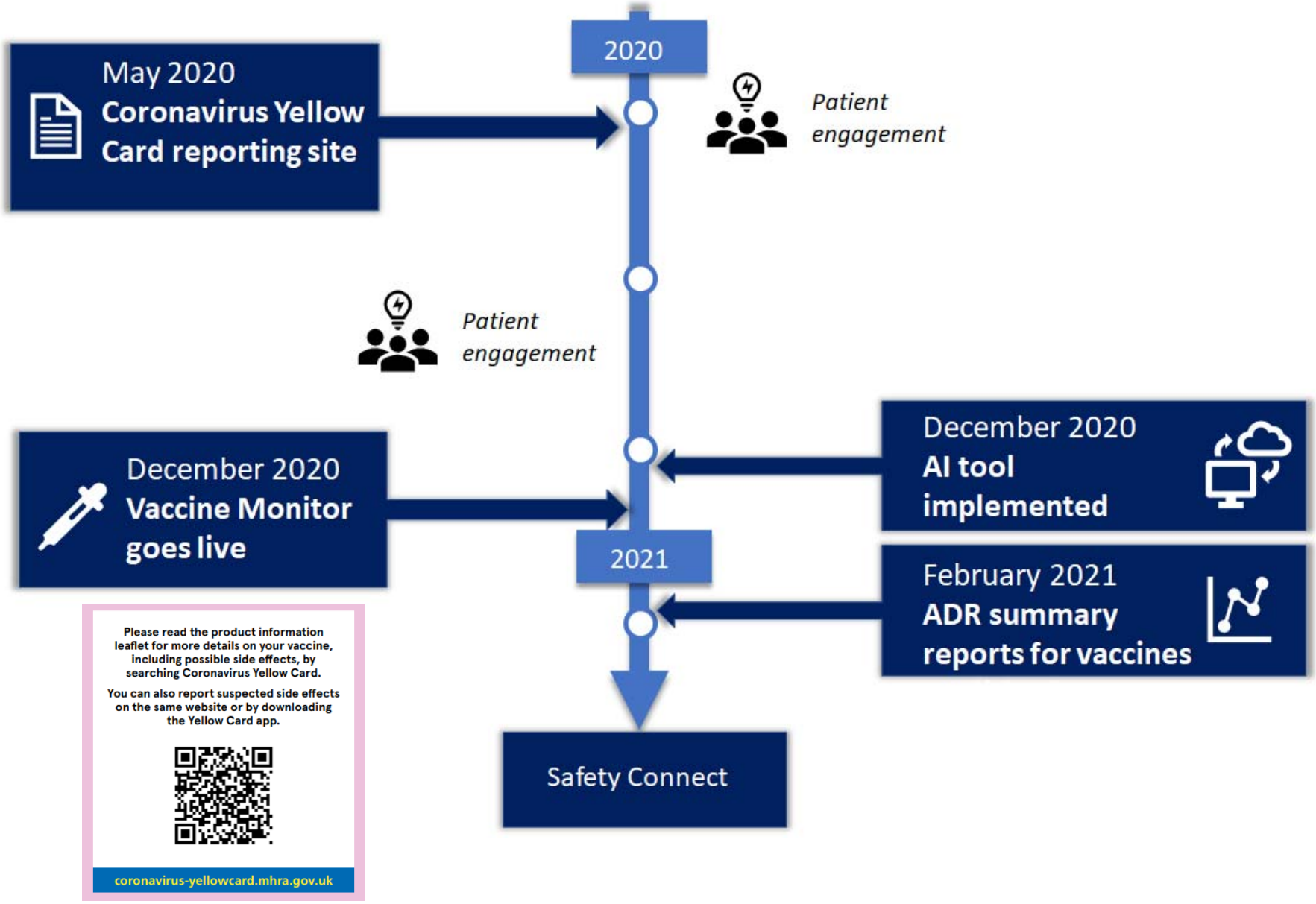
Reminder about the COVID-19 campaign toolkit

- Campaign toolkit briefing sheet
- **PDF formats for in-house colour printing**
- **Posters**
- A4 Poster - PDF
- A3 Poster - PDF
- **Postcard/ leaflet**
- Postcard – A6 (single) - PDF
- Postcard – 4x A6 postcards on one A4 page - PDF
- Digital screen 16 x 9 – JPEG (horizontal)
- Digital screen 9 x 16 – JPEG (vertical)
- Graphic and animation assets and posts wording for use across social media.File type – Zip file
- **Email signature**
- Signature banner or text hyperlinked to the reporting site - https://coronavirus-yellowcard.mhra.gov.uk
- Email signature banner- version 1 – PNG
- Email signature banner – version 2 – PNG
- Text version (if you can't use the banner, please use the following text hyperlinks)
- Report side effects of Covid-19 vaccine to the MHRA Yellow Card scheme. Every report counts.



https://coronavirus-yellowcard.mhra.gov.uk/campaignpage

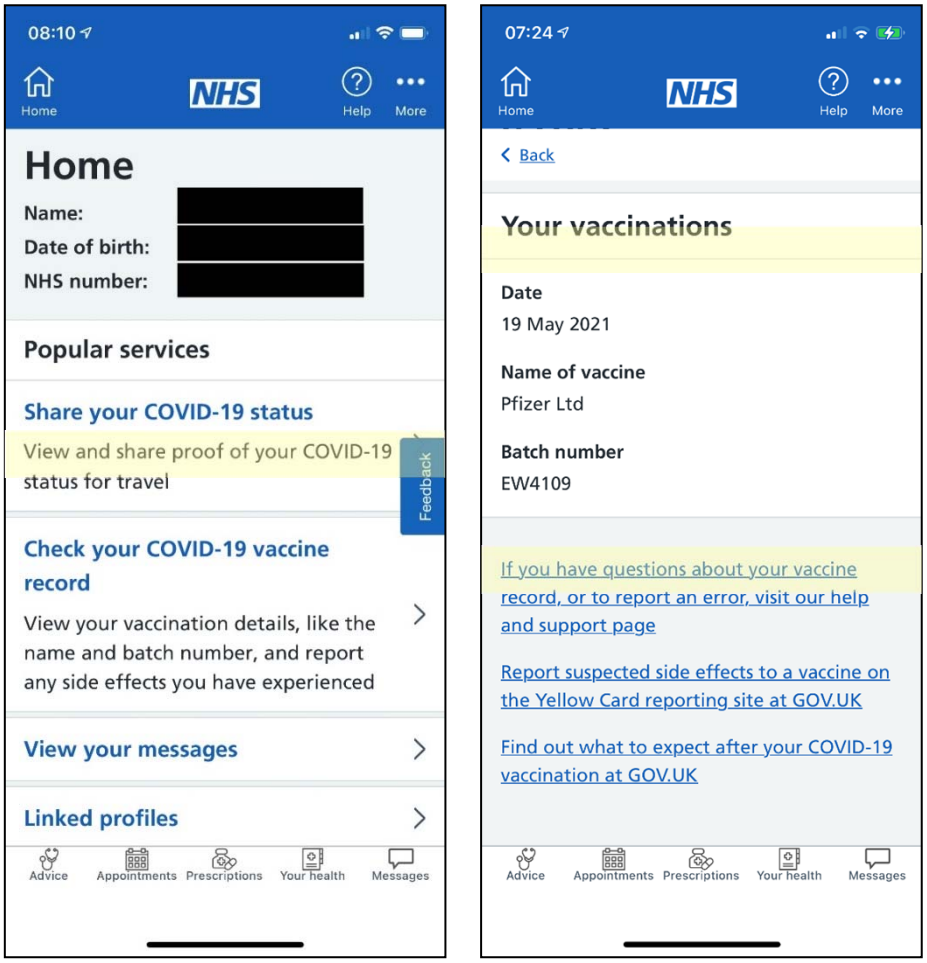
MHRA


May 2020
Coronavirus Yellow Card reporting site
2020
Patient engagement
Patient engagement
December 2020
Vaccine Monitor goes live
December 2020
AI tool implemented
2021
February 2021
ADR summary reports for vaccines
Safety Connect
Please read the product information leaflet for more details on your vaccine, including possible side effects, by searching Coronavirus Yellow Card.
You can also report suspected side effects on the same website or by downloading the Yellow Card app.
coronavirus-yellowcard.mhra.gov.uk

Enhanced passive surveillance: Challenges

- Assessment of large datasets meant need for greater triage and an agile process
- Systems processes had to be closely monitored as they weren't used to the high volumes
- AI introduction
- Enhancements to the websites e.g. mandating MedDRA

NHS App Integration



- Stage one of integration of Yellow Card into the NHS App is complete
- Full vaccination record and prominent linking to side effect reporting
- This will be rolled out to all other products after the new Yellow Card launch
- Further integration stages will enable NHS login to be used for Yellow Card delivering a fully integrated experience

Active monitoring of COVID-19 vaccine

Invitation letter

↓

Patient requested to register before they have first dose of vaccine

↓

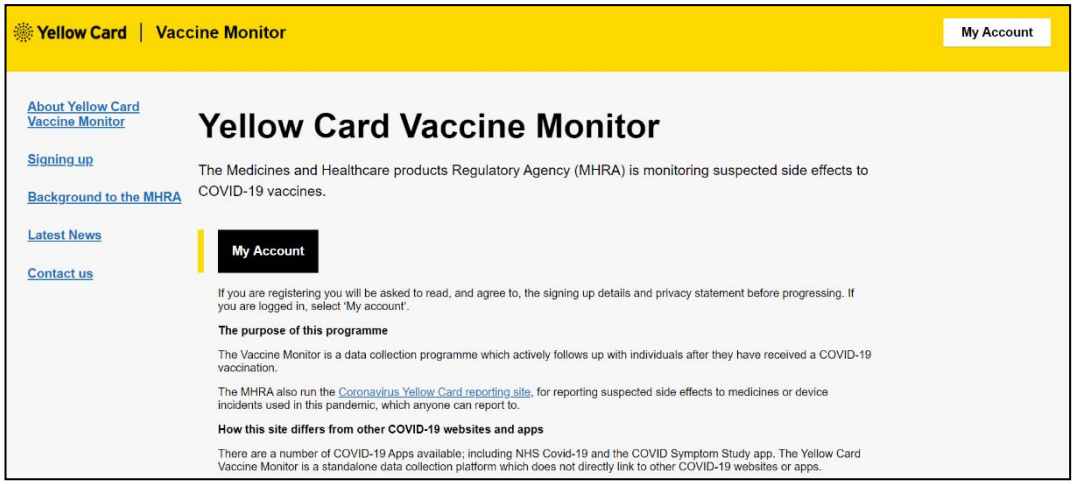
Patient provides background on medical history

↓

At time of vaccination, the patient enters vaccine details, including brand and batch

↓

Patient is contacted at points thereafter to check for any side effects



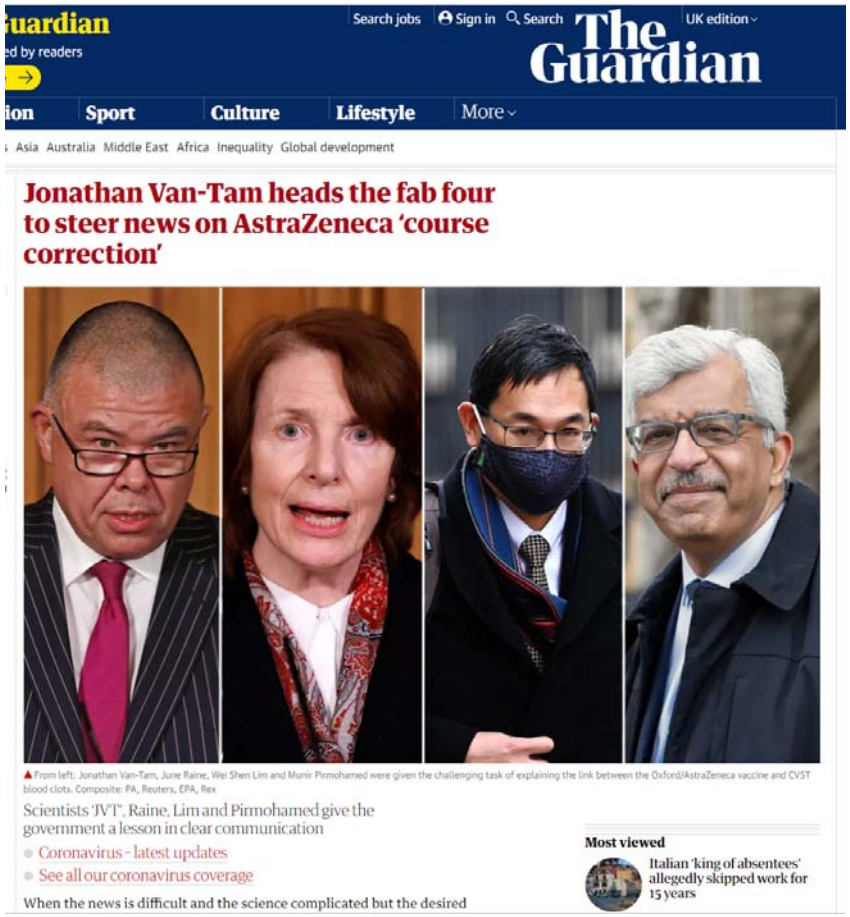
https://vaccinemonitor-yellowcard.mhra.gov.uk/

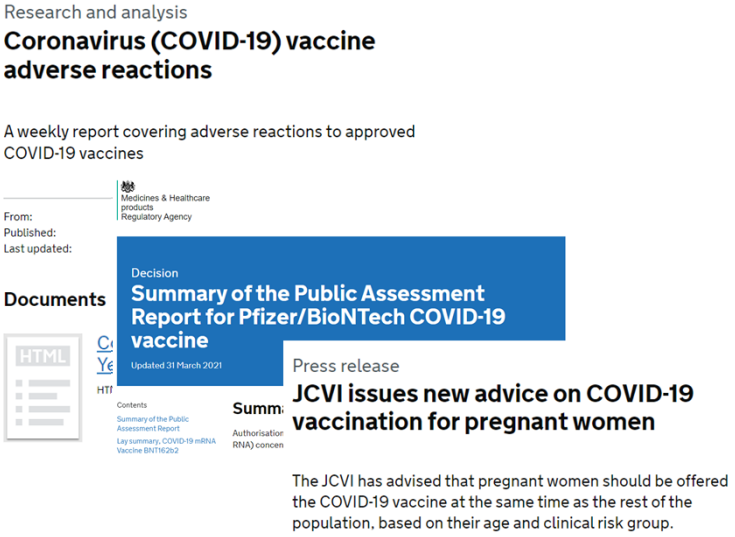
Follow-ups are sent

- One week after first and second dose
- Two weeks after first and second dose
- Twelve weeks after first dose
- Then every three months thereafter for approximately one year from the date of the first dose

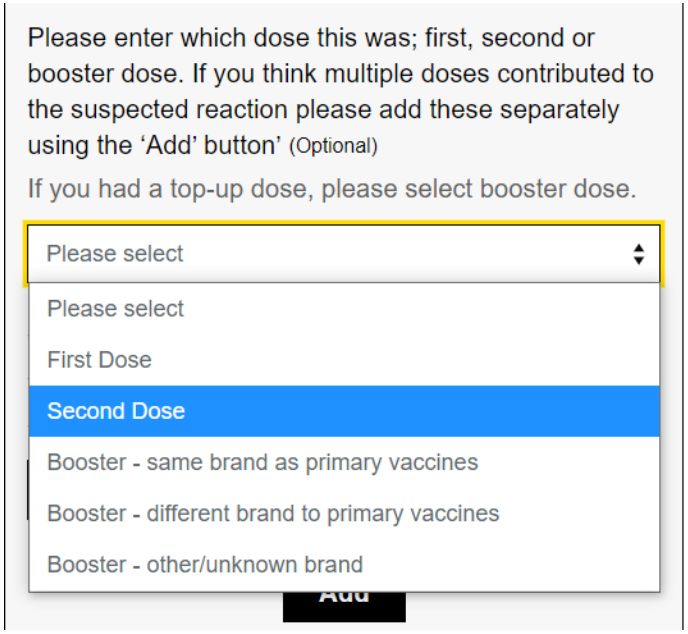
Vaccines: communications following launch

- Provision of information about vaccines, their assessment, side-effects reported… and any uncertainties about these (transparency)
- Information about vaccine rollout programme (and any changes to this based on new safety information)
- Continuous encouragement to report AEFI (for HCPs and patients)
- Safety messages to communicate will **evolve** with vaccine rollout; developed in collaboration with stakeholders





Yellow Card - Booster additions



- Reporters are advised to add previous COVID-19 vaccines as concomitant medications
- Be mindful of some reporters selecting the wrong dose

How will we improve the patient journey?

Yellow Card and Vigilance Hub Project

Improving transparency and patient feedback

Enhancing our safety reporting - changing reporting to dialogue

Increasing yearly safety reporting

Core Vigilance technology Programme

Reducing preventable patient harm

Improving public health

Linking the healthcare systems by connecting the Yellow Card and NHS apps

Capturing better quality and higher volumes of safety data

New state-of-the-art technology to manage and detect safety signals, utalising artificial intelligence and machine learning to automate report processing and help our experts concentrate on activities which will have the greatest public health benefit

Earlier signal detection and improved safety interventions

Signal Detection Research Project

Covid-19 AI Tool Project (Complete)

Reducing effort through automation of manual tasks

Common Integrated Vigilance Service Project

MHRA

Joined up multiskilled teams

Increasing capacity to meet future service demand

A final thought….

And I want to end by expressing our sincere gratitude