

7TH OCTOBER 2019

VACCINATIONS

AGENDA

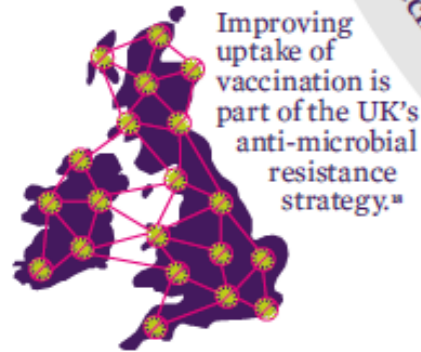
- WHY VACCINATE
- ADDRESS SOME COMMON QUESTIONS
- LOOK AT SHINGLES, INFLUENZA, HPV & MEASLES
- Q&A

Public health benefits of vaccination

With the development of new vaccines, the NHS immunisation programme has expanded to offer protection against many infectious diseases to specific age groups and those most at risk from infection or complications.^{5, 20}



The UK has long recognised vaccination as a public health priority^{8, 19}



Improving uptake of vaccination is part of the UK's anti-microbial resistance strategy.²¹

Date of preparation: June 2018

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Vaccination greatly reduces the burden of infectious diseases¹

Vaccination has resulted in dramatic falls in rates of many vaccine preventable diseases in the UK

Polio
100%
reduction²

Measles
99%
reduction⁴

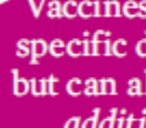
Only clean water rivals vaccines at reducing infectious diseases and deaths.¹

Immunisation has the potential to prevent 6 million deaths worldwide each year.²



Vaccination can help the global fight against antibiotic resistance⁶.

Vaccines target specific diseases but can also have additional health benefits¹



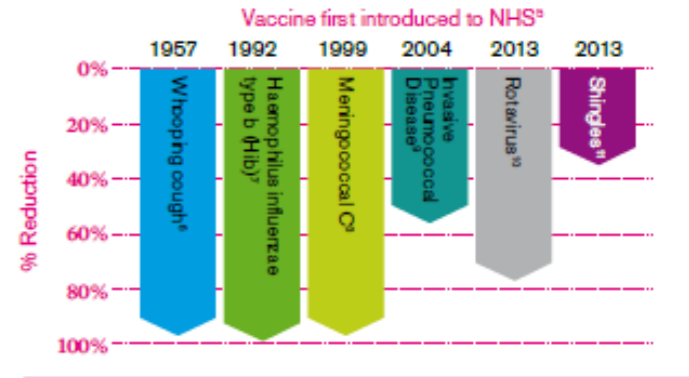
Vaccines help people with serious and long term conditions to stay healthy^{4, 15}

Vaccines save lives and prevent disability^{1, 2}

Invasive meningococcal disease¹²

Invasive pneumococcal disease¹³

Disease reduction following NHS vaccination



Meningococcal and pneumococcal disease^{12, 13}

- Can cause septicaemia and meningitis
- Can kill
- 20-25% of survivors of invasive disease have permanent effects including:
 - Limb amputations
 - Brain damage
 - Hearing loss
- The NHS offers vaccination against strains of meningococcus and pneumococcus to specific age groups



Influenza

In a US study an elderly population vaccinated against influenza had:

APPROX. 20% LESS CHANCE

of being hospitalised for cardiovascular and cerebrovascular disease than an elderly unvaccinated population¹⁵

FAQ

- ▶ How effective are they?
- ▶ How safe to give multiple vaccinations to babies all at once
- ▶ Autism and MMR
- ▶ Vaccination and allergies
- ▶ Live vaccines
- ▶ Diphtheria no longer exists in UK, why bother

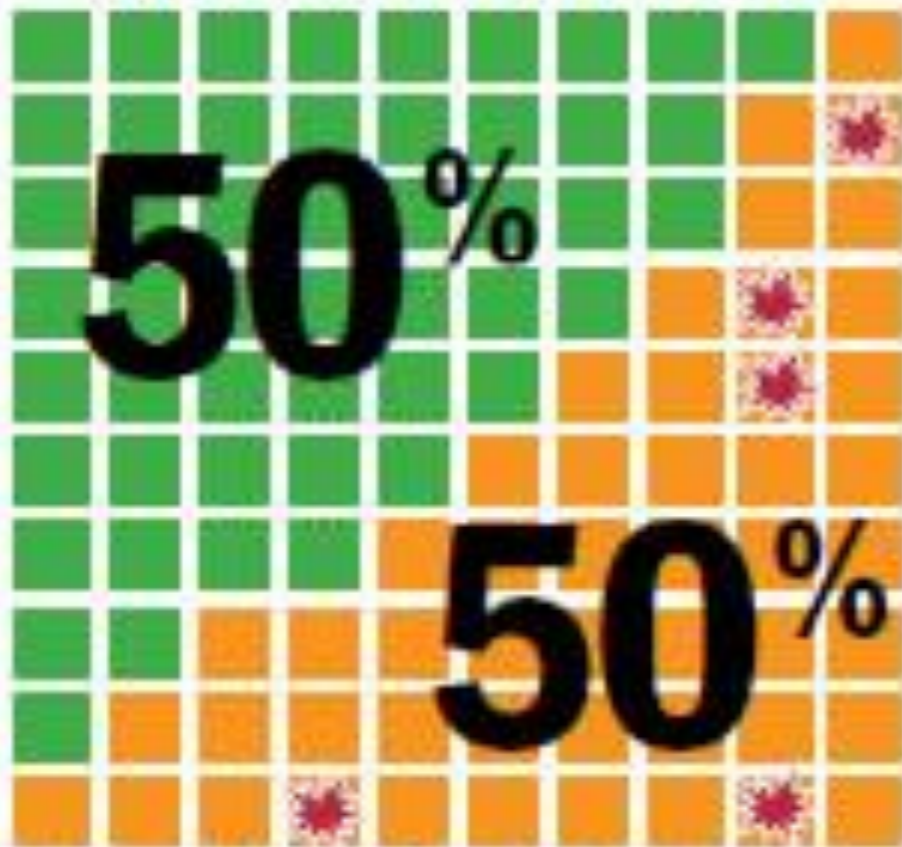
REDUCTION IN VACCINATION UPTAKE

- ▶ England is a world leader in childhood vaccinations.
- ▶ Uptake slowly reducing since 2012
- ▶ Parental confidence remains high despite anti-vaccination campaigns on social media

SHINGLES VACCINATION

- ▶ 50% of people will get shingles by age of 85
- ▶ 60% reduction in incidence of shingles
- ▶ 10% of people with shingles will develop post herpetic neuralgia (HPN)
- ▶ 67% reduction in the incidence of HPN from shingles

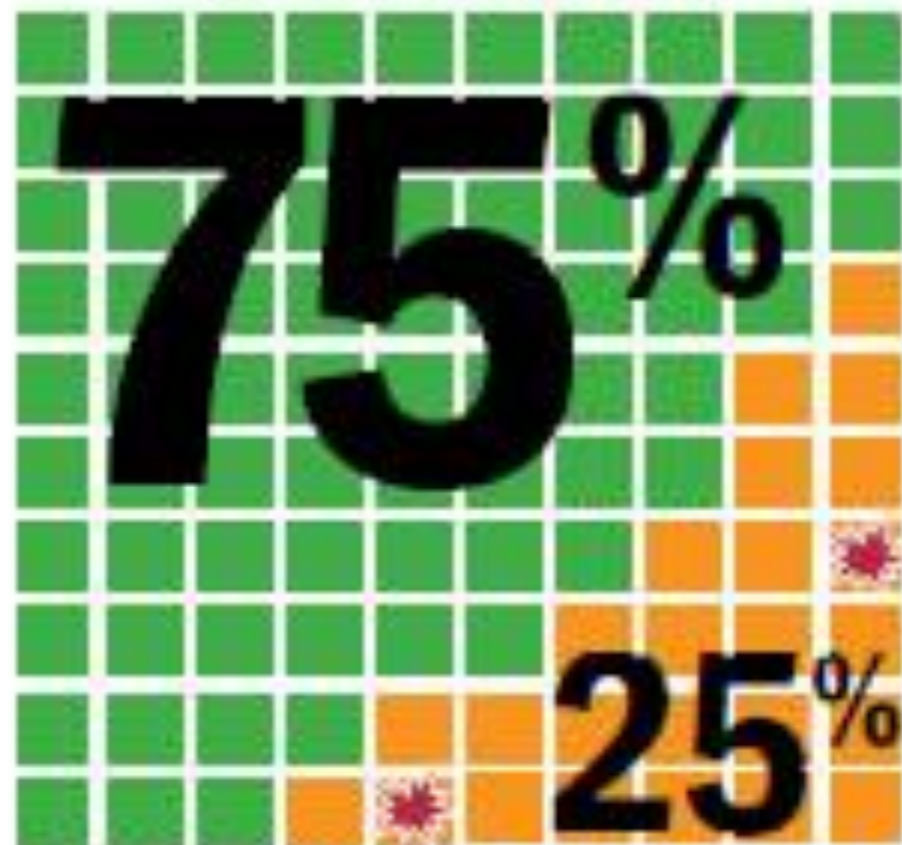
NOT VACCINATED...



50% will **NOT** get shingles
50% will get shingles

Five of the men with shingles will develop PHN

VACCINATED...



75% will **NOT** get shingles
25% will get shingles

Two of the men with shingles will develop PHN

September 2019 – 31 August 2020

Shingles eligibility

- ✓ Eligible
- ✗ Non eligible

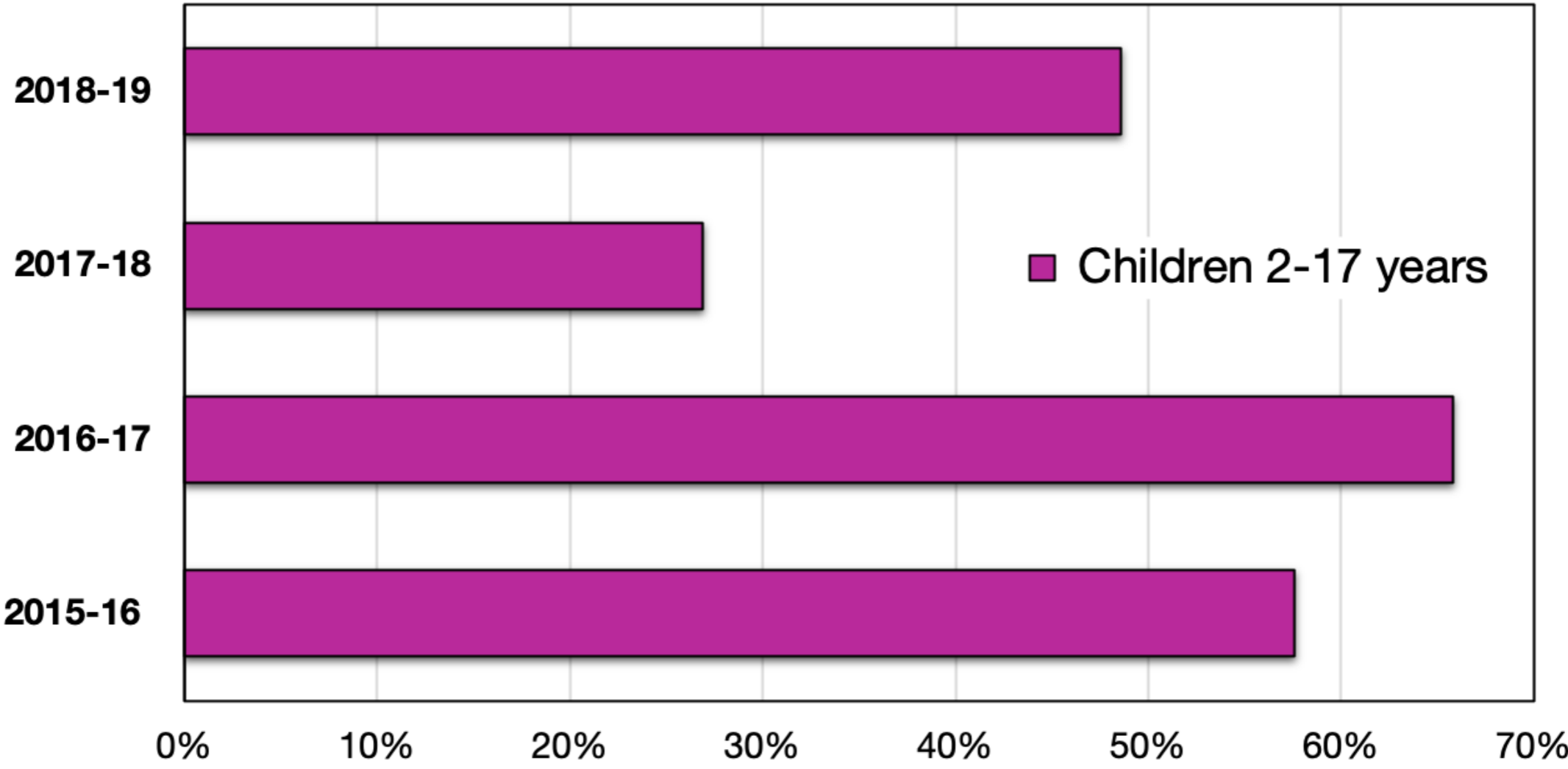


Patients remain eligible for the shingles vaccine up until their 80th birthday

INFLUENZA VACCINATION

- ▶ Last year 60% protection against circulating 'flu strains from the adjuvant vaccine for over 65's (44% reduction across all ages)
- ▶ 20% reduction in stroke and heart attacks in over 65's
- ▶ 44% reduction in GP appointments for 'flu
- ▶ Delay in quadrivalent vaccine

Flu vaccine effectiveness



CERVICAL CANCER

- ▶ 2 doses 6-24months apart
- ▶ HPV which causes 99% of all cases of cervical cancer
- ▶ 75-80% of cervical cancer caused by HPV types 16/18
- ▶ Since introduction 71% fall in pre-cancerous cervical disease
- ▶ Genital warts declined by 90% in girls and 70% in boys.
- ▶ Now boys can get it too
- ▶ STILL NEED CERVICAL SCREENING.

HPV VACCINE

Protects against Human Papillomavirus strains which cause cervical cancer

Most common cancer



HPV types 16 and 18 responsible for 75% cervical cancer in Europe



850



die from cervical cancer each year

VACCINE
99%
EFFECTIVE

TARGETS

HPV
6 11
16 18



DOSE 1

Girls aged 12-13
School year 8



DOSE 2

6-12 months later



HPV Vaccine to be offered to boys in school in 2019

Currently available from GUM clinics for men having sex with men



MEASLES

- ▶ 2017 WHO declared UK had eliminated measles based on 2014-2016 data.
- ▶ 2018 there were 991 confirmed cases.
- ▶ Several large outbreaks across Europe
- ▶ First dose coverage 95%. Second dose 87.4%
- ▶ Need 2 doses to protect
- ▶ We check 10-11yo for their status and invite them in.

The routine immunisation schedule from Autumn 2019

Age due	Diseases protected against	Vaccine given and trade name		Usual site
Eight weeks old	Diphtheria, tetanus, pertussis (whooping cough), polio, <i>Haemophilus influenzae</i> type b (Hib) and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa	Thigh
	Pneumococcal (13 serotypes)	Pneumococcal conjugate vaccine (PCV)	Prevenar 13	Thigh
	Meningococcal group B (MenB)	MenB	Bexsero	Left thigh
	Rotavirus gastroenteritis	Rotavirus	Rotarix	By mouth
Twelve weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa	Thigh
	Rotavirus	Rotavirus	Rotarix	By mouth
Sixteen weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa	Thigh
	Pneumococcal (13 serotypes)	PCV	Prevenar 13	Thigh
	MenB	MenB	Bexsero	Left thigh
One year old (on or after the child's first birthday)	Hib and MenC	Hib/MenC	Menitorix	Upper arm/thigh
	Pneumococcal	PCV	Prevenar 13	Upper arm/thigh
	Measles, mumps and rubella (German measles)	MMR	MMR VaxPRO ² or Priorix	Upper arm/thigh
	MenB	MenB booster	Bexsero	Left thigh
Eligible paediatric age groups ¹	Influenza (each year from September)	Live attenuated influenza vaccine LAIV ^{2,3}	Fluenz Tetra ^{2,3}	Both nostrils
Three years four months old or soon after	Diphtheria, tetanus, pertussis and polio	DTaP/IPV	Infanrix IPV or Repevax	Upper arm
	Measles, mumps and rubella	MMR (check first dose given)	MMR VaxPRO ² or Priorix	Upper arm
Boys and girls aged twelve to thirteen years	Cancers caused by human papillomavirus (HPV) types 16 and 18 (and genital warts caused by types 6 and 11)	HPV (two doses 6-24 months apart)	Gardasil	Upper arm
Fourteen years old (school year 9)	Tetanus, diphtheria and polio	Td/IPV (check MMR status)	Revaxis	Upper arm
	Meningococcal groups A, C, W and Y disease	MenACWY	Nimenrix or Menveo	Upper arm
65 years old	Pneumococcal (23 serotypes)	Pneumococcal Polysaccharide Vaccine (PPV)	Pneumococcal Polysaccharide Vaccine	Upper arm
65 years of age and older	Influenza (each year from September)	Inactivated influenza vaccine	Multiple	Upper arm
70 years old	Shingles	Shingles	Zostavax ²	Upper arm

1. See Green book chapter 19 or visit www.gov.uk/government/publications/influenza-the-green-book-chapter-19 or www.nhs.uk/conditions/vaccinations/child-flu-vaccine/

2. Contains porcine gelatine.

3. If LAIV (live attenuated influenza vaccine) is contraindicated and child is in a clinical risk group, use inactivated flu vaccine.

For vaccine supply information for the routine immunisation schedule please visit www.imform.dh.gov.uk and check vaccine update for all other vaccine supply information.

Selective immunisation programmes

Target group	Age and schedule	Disease	Vaccines required
Babies born to hepatitis B infected mothers	At birth, four weeks and 12 months old ^{1,2}	Hepatitis B	Hepatitis B (Engerix B/HBvaxPRO)
Infants in areas of the country with TB incidence $\geq 40/100,000$	At birth	Tuberculosis	BCG
Infants with a parent or grandparent born in a high incidence country ³	At birth	Tuberculosis	BCG
At risk children	From 6 months to 17 years of age	Influenza	LAIV or inactivated flu vaccine if contraindicated to LAIV or under 2 years of age
Pregnant women	During flu season At any stage of pregnancy	Influenza	Inactivated flu vaccine
Pregnant women	From 16 weeks gestation	Pertussis	dTaP/IPV (Boostrix-IPV or Repevax)

1. Take blood for HBsAg at 12 months to exclude infection.

2. In addition hexavalent vaccine (Infanrix hexa) is given at 8, 12 and 16 weeks.

3. Where the annual incidence of TB is $\geq 40/100,000$ – see www.gov.uk/government/publications/tuberculosis-tb-by-country-rates-per-100000-people

Additional vaccines for individuals with underlying medical conditions

Medical condition	Diseases protected against	Vaccines required ¹
Asplenia or splenic dysfunction (including due to sickle cell and coeliac disease)	Meningococcal groups A, B, C, W and Y Pneumococcal Haemophilus influenzae type b (Hib) Influenza	Hib/MenC MenACWY MenB PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Cochlear implants	Pneumococcal	PCV13 (up to two years of age) PPV (from two years of age)
Chronic respiratory and heart conditions (such as severe asthma, chronic pulmonary disease, and heart failure)	Pneumococcal Influenza	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Chronic neurological conditions (such as Parkinson's or motor neurone disease, or learning disability)	Pneumococcal Influenza	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Diabetes	Pneumococcal Influenza	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Chronic kidney disease (CKD) (including haemodialysis)	Pneumococcal (stage 4 and 5 CKD) Influenza (stage 3, 4 and 5 CKD) Hepatitis B (stage 4 and 5 CKD)	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine Hepatitis B
Chronic liver conditions	Pneumococcal Influenza Hepatitis A Hepatitis B	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine Hepatitis A Hepatitis B
Haemophilia	Hepatitis A Hepatitis B	Hepatitis A Hepatitis B
Immunosuppression due to disease or treatment ²	Pneumococcal Influenza	PCV13 (up to two years of age) ² PPV (from two years of age) Annual flu vaccine
Complement disorders (including those receiving complement inhibitor therapy)	Meningococcal groups A, B, C, W and Y Pneumococcal Haemophilus influenzae type b (Hib) Influenza	Hib/MenC MenACWY MenB PCV13 (to any age) PPV (from two years of age) Annual flu vaccine

1. Check relevant chapter of green book for specific schedule.

2. To any age in severe immunosuppression.

3. Consider annual influenza vaccination for household members and those who care for people with these conditions.

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