

National Policy Workshop Webinar Series
On
Countermeasures for Riverine and Marine Plastic Litter in India
12 -22 May 2020

Session 5: Impact of COVID-19 on plastics consumption, innovation, logistics and waste generation (including PPEs and wastes from Health Care Facilities) and related challenges

**PPE' s for Healthcare Providers,
What we have vs What we desire**



शरीरमाद्यं खलु धर्मसाधनम्

AIIMS
NEW DELHI



Defining PPE

Equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses

We need to know.....

- When it is necessary
- What kind is necessary
- The limitations of the equipment
- How to properly put it on, adjust, wear and take it off
- Proper care, maintenance, useful life, and disposal of the equipment



Masks



- ✓ Water repellency and wettability
- ✓ Liquid penetration resistance
- ✓ Air permeability
- ✓ Water vapor permeability
- ✓ Unit weight
- ✓ Thickness



Powered Air Purifying Respirators



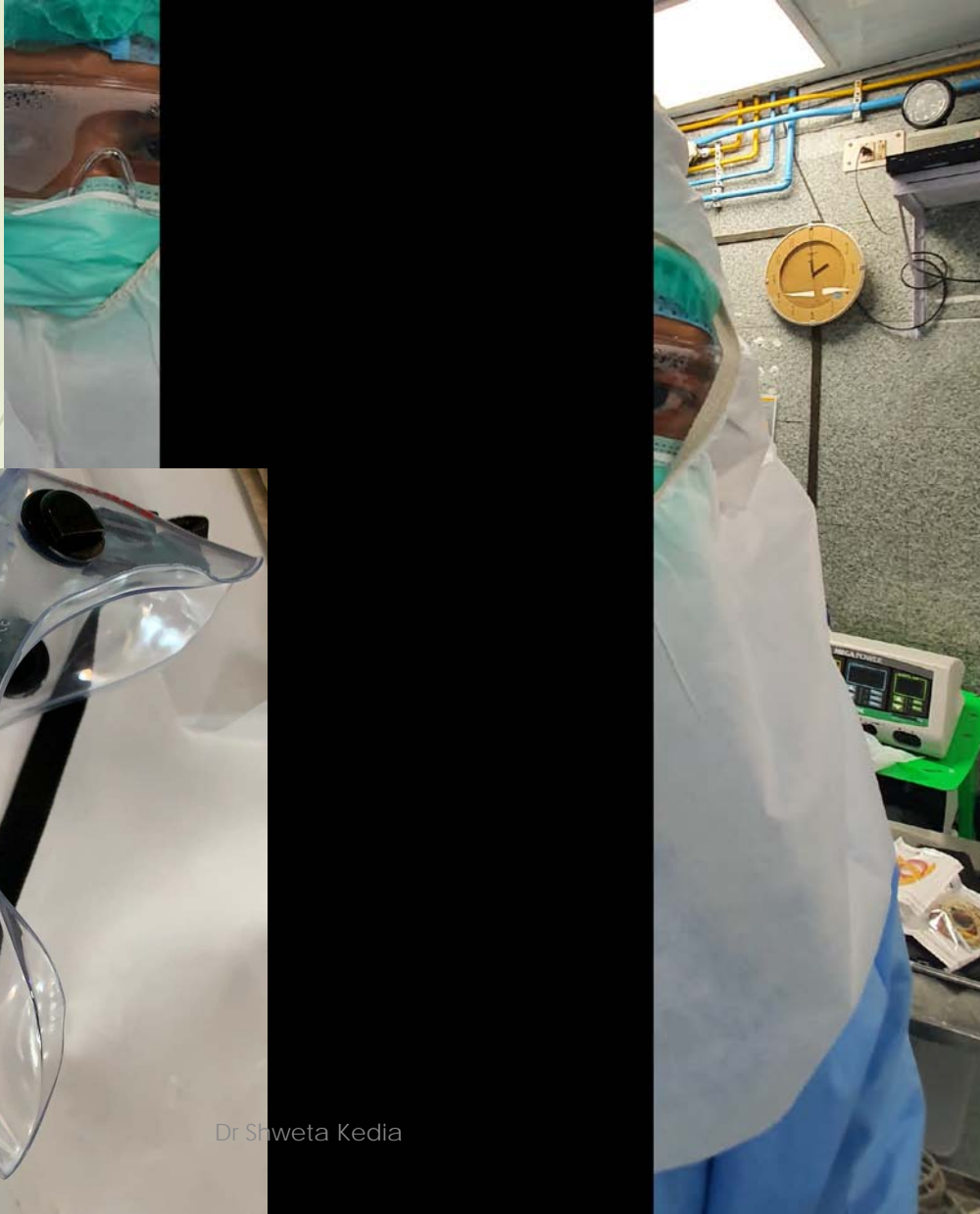
Protection offered by the PAPR is 2.5-fold greater than that offered by the N95 FFR

PAPR availability will always be a problem in the event of a major outbreak or act of bioterrorism (1400 USD vs 1.5 USD)

20-05-2020

Goggles

- ✓ Antifog Coating layer
- ✓ Comfortable Nasal Care
- ✓ Multi hole vent design for airflow
- ✓ Adjustable Mask belt



Dr Shweta Kedia



20-05-2020

Face shield



Used as an additional physical barrier to respiratory droplets

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[Am J Infect Control](#). 2020 Apr 2
20-05-2020
doi: [10.1016/j.ajic.2020.03.016](https://doi.org/10.1016/j.ajic.2020.03.016)

Gloves

GLOVE TYPE	DEFINITION	ADVANTAGE	PROTECTION LEVEL
Latex Gloves	Made of natural rubber	Highest comfort, flexibility, fit and tactile sensitivity	Bacteria, viruses
Nitrile Gloves	Made of synthetic material	Stretchy, durable	Chemicals, viruses
Vinyl Gloves	Made of synthetic material, sometimes referred to as synthetic	Cost-efficient synthetic option, comfortable	Chemicals



Dr Shweta Kedia
Multiple layers of gloves limit dexterity

Gowns

- ✓ Water resistance
- ✓ Blood and Viral penetration resistance

Critical zones that must pass:



Front chest

Sleeve seam

Sleeve

Front belt*
attachment
point

*The front belt attachment must pass if it is in the front chest critical zone.

Level 3



Level 4

Content source: [Centers for Disease Control and Prevention](#),
[National Institute for Occupational Safety and Health](#),
[National Personal Protective Technology Laboratory](#)

Levels of PPE



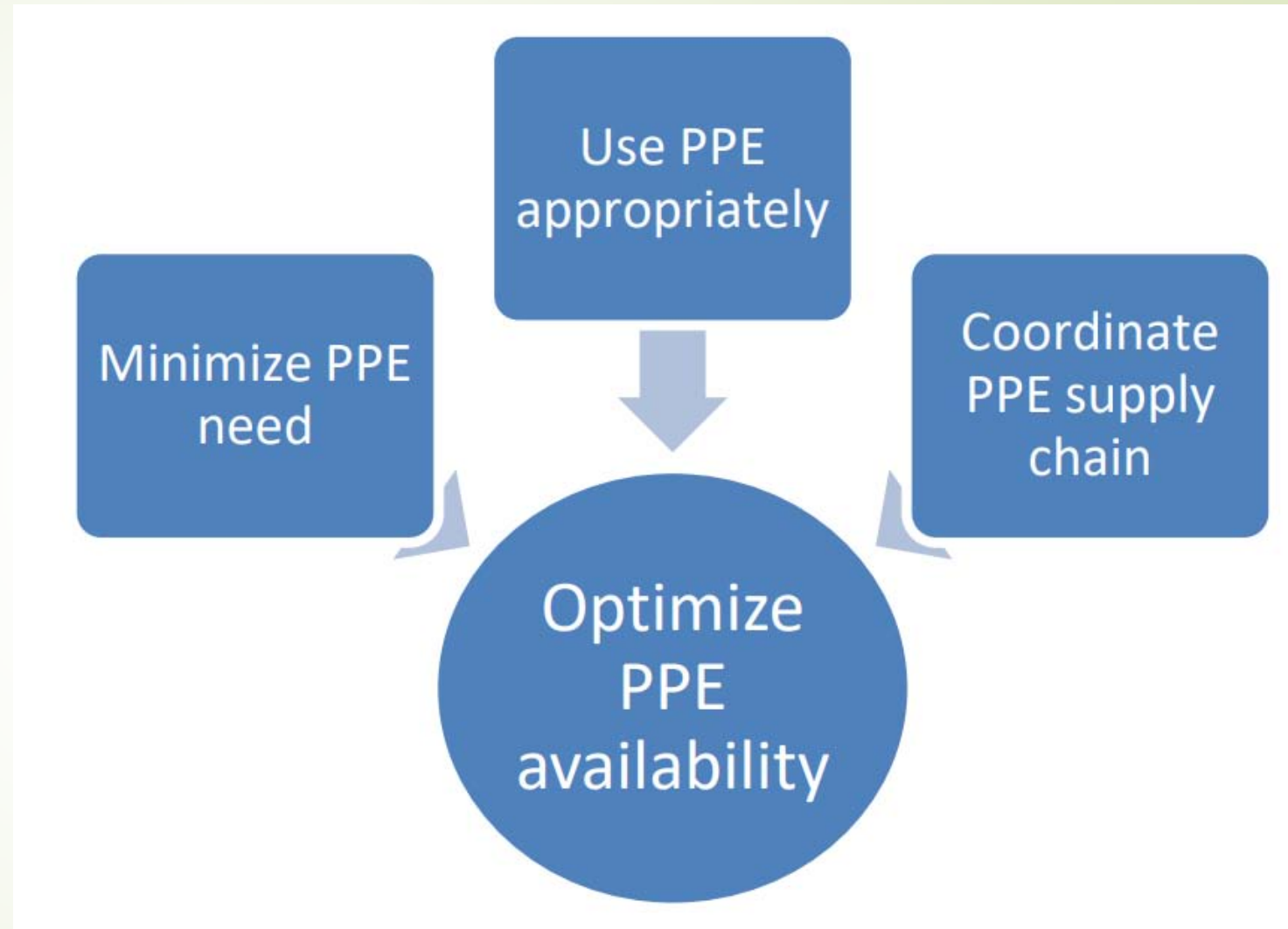
Limitations

- Increased breathing resistance
- Fit-testing
- Visibility
- Communication difficulties
- Psychological issues
- Increased risk of infection



Conclusion

- Right PPE, donned correctly, worn in safely and safe doffing is must
- Impact of PPE on HCW performance significant
- Improvisation is an evolving process





6 🕒 1hr HRD Ministry to announce CBSE class 10, 12 exam schedule on May 18

7 🕒 1hr Distribute free ration to eight crore migrants within 15 days: Centre to

8 🕒 2hrs Northern t command with Ch should have Navy

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HYDERABAD

KOCHI

KOLKATA

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DELHI

AIIMS doctor removes safety gear, risks life to save COVID-19 patient

Thank You

Additional read

Glancey, Margaret, et al. "Design improvements for personal protective equipment used in Ebola and other epidemic outbreaks." *Global Health: Science and Practice* 5.2 (2017): 325-328.

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