

Constant worry over costly replacement of damaged seat cushions in the hospital's fleet of vehicles is now over

BACKGROUND

If one thing will cost the hospital's transport portfolio in the first quarter of 2017, it is the changing of all the passenger seat cushions, damaged by accidental jarring, inside its three mini-vans. Our front-runners in transport, the drivers, have long known it is damage waiting to happen, but they have to let the wheelchairs and trolleys be hoisted onto the vehicles anyway, when these belong to the patients that are being ferried.

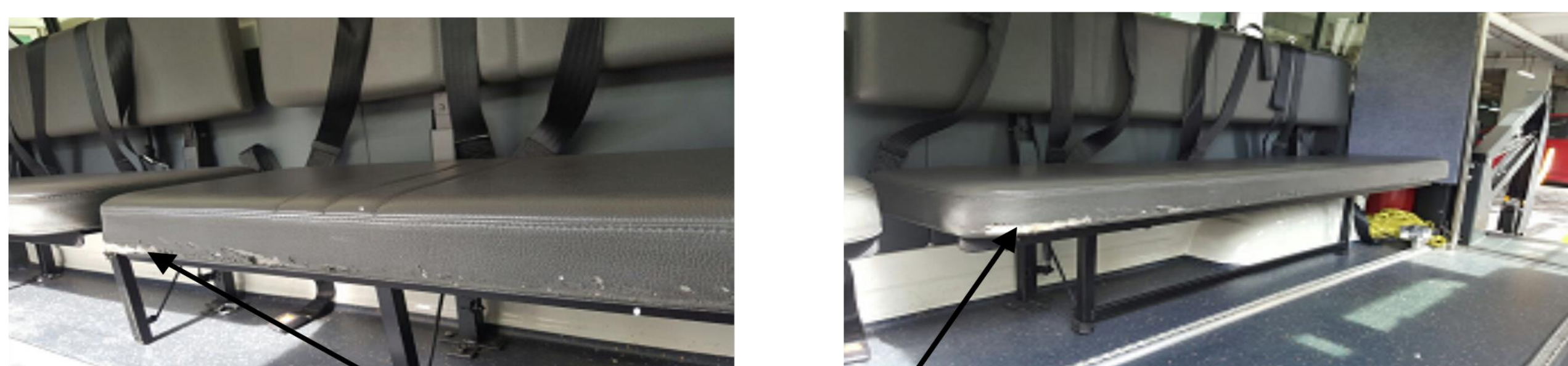
After the wheelchairs or trolleys have been hoisted into the back of the mini-vans, they are limited to forward or backward movement along the aisle, which might result in their accidental and, occasionally forceful contact against the passenger seats mounted on either side of the aisle. The cushion covering over the seat rails have always been most vulnerable to serious damage by such jarring. Without any protection, it is just matter of time before the cushions become damaged irretrievably.

PROJECT AIM

To find a sustainable way to protect the cushion covering over the seat rails when these come into accidental contact with another object, in the hope that the intervention will save the exorbitant cost of having to frequently replace badly damaged seat cushions.

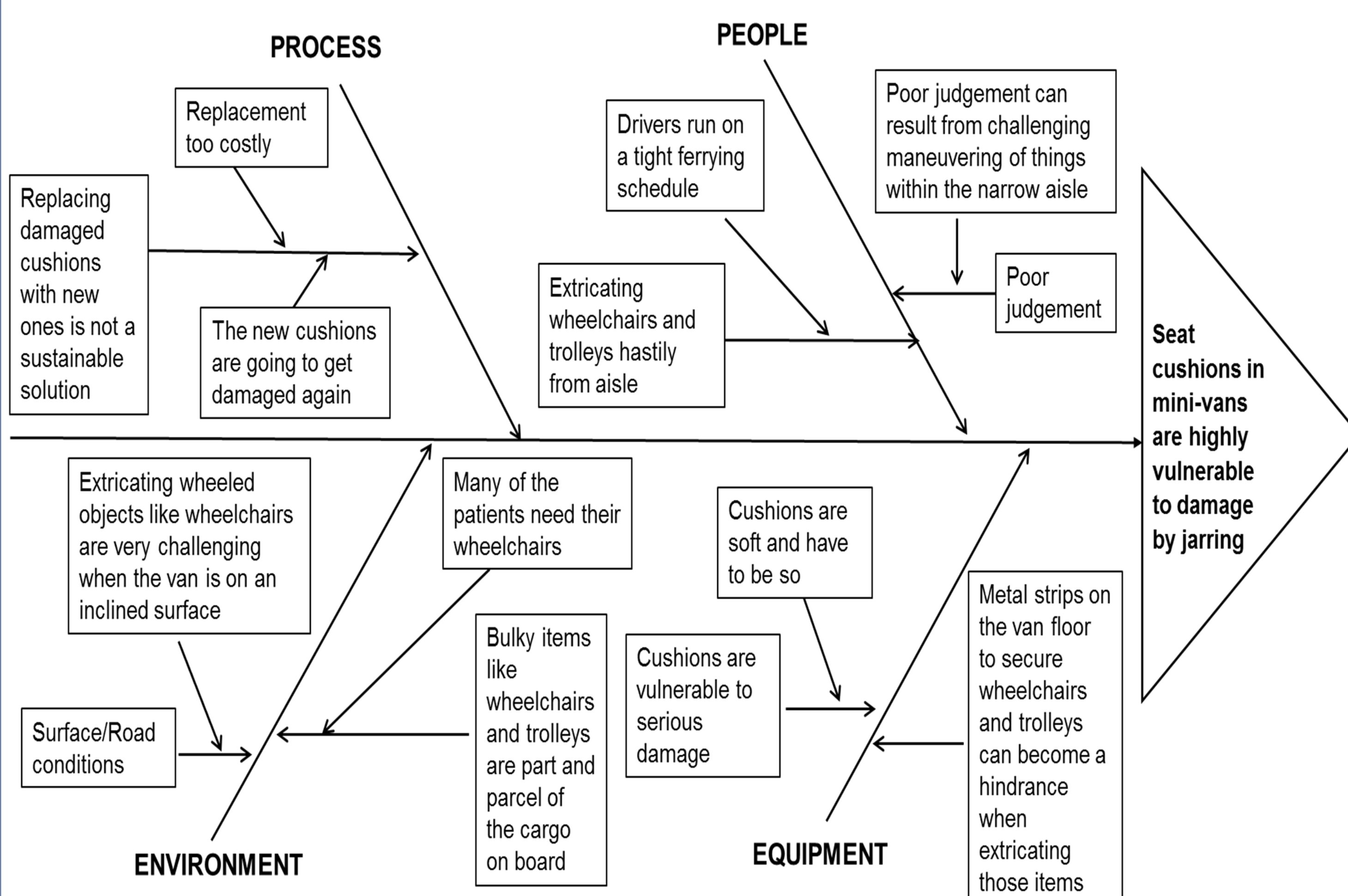
ANALYSIS

You can already see the how the early damages on the cushion covering over the seat front rails look like in the two pictures below:



Damages on cushion covering over seat rails

As you would have guessed from the pictures, there is little wriggle room for you to prevent accidental contact with the seat front rails in trying to extract a wheelchair or trolley from the narrow aisle when all the seats have been folded down with people already seated on them. It is damage waiting to happen. The project team comprising all the drivers have noted this and other factors for sometime as the root causes of the damages seen in the above pictures. All the factors that were identified have been put together in the fish-bone diagram shown below:



SOLUTIONS

One day, a member of the team happened to see some wall guards made of PVC in the hospital maintenance room. Upon closer inspection, and like a sudden bolt from the blue, an idea came into his mind. The wall guards can be modified for use as a protective barrier over the seat rail cushion!

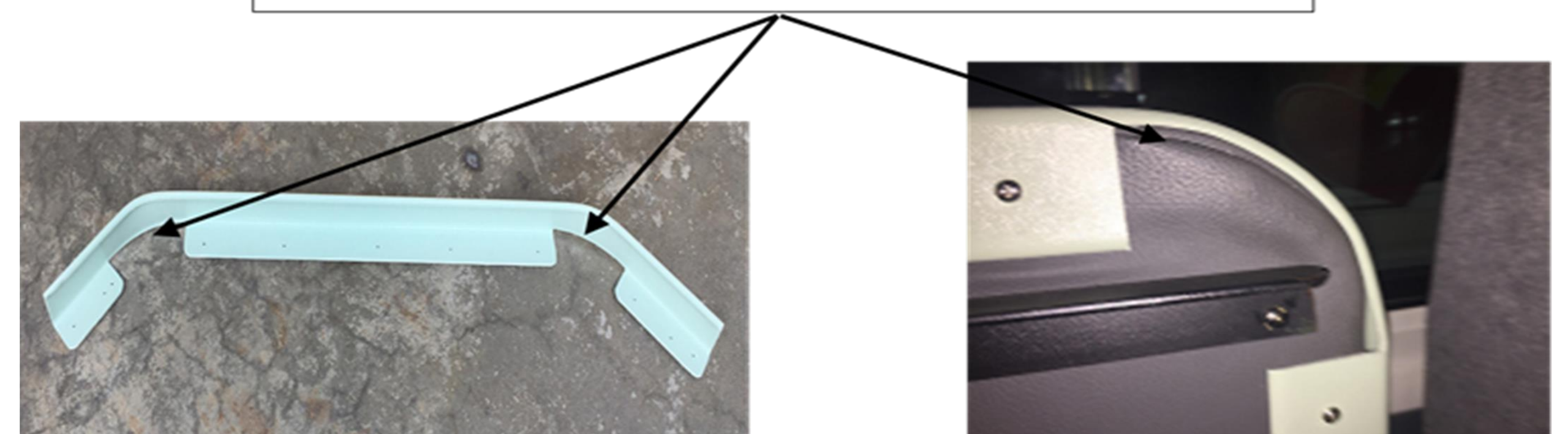


Team Leader
Mr Lim holding a wall guard

According to the maintenance guys, there is a surplus stock of those wall guards, and certainly plentiful enough for the project team to test out their ideas. The challenge facing the team is not about quantity, but rather, the suitability of the wall guard. The team had to grapple for a period of time how to bend the wall guard to fit the round corners of the seats. Plan A is to use heat to do the bending, but it took just one charred piece to convince everyone on the team that toasting PVC had been a terrible idea.

Plan B in the Plan-Do-Check-Act cycle is to cut a groove into the wall guard's L-shaped cross-section and then try to bend it around the weakened grooved section. The pictures below will convince anyone that Plan B has been a great success.

Grooves cut into the L-shaped cross section before attempting to bend the PVC wall guard to fit the seat corner



PROJECT'S IMPACT

The wall guards have already been secured all around the seat rails in all three vehicles to protect the cushion underneath. With the protective barriers in place, there is no longer any worry about hard accidental knocks against the soft cushion on the seat front rails when moving wheelchairs or trolleys through the passage of the narrow aisle. Moving those objects is now anxiety-free, smoother and a lot much faster. Everyone is happy.

Wall guards recycled costlessly and modified aesthetically for use as protective barriers for vehicular sofas



The success of this project, and the first attempt at one by our hospital's drivers, has added a very meaningful dimension to their work. The hospital management is so encouraged, they just wanted this project be featured in this year's hospital's annual QI poster competition. The very conception of the project show this is what happy employees do.



Project team's group photo

SUSTAINABILITY AND SPREAD

The success of this project has saved the hospital no less than \$3,000, which would have been the price tag for replacing all the seat cushions in its entire fleet of mini-vans. It's worth repeated repeating that the project has not cost anything because the wall guards were surplus stocks and a sunk cost.