- C. Main Section of the proposal
- 1. Overall Goal & Objectives
 - Objective: to increase opportunities for comprehensive tobacco dependence treatment at local pharmacies.
 - Goal: to promote understanding of tobacco dependence at local pharmacies and among pharmacists and to improve information sharing capabilities for encouraging treatment of tobacco dependence in order to achieve the objective of the program.
- 2. Current Assessment of need in target area

According to the 2015 National Health and Nutrition Examination Survey¹⁾, 18.2% of the population habitually smoked; by gender, 30.1% of males and 7.9% of females. By age group, the smoking ratios were higher for both genders among the generation of parents of school-age children. Among those who habitually smoked, 27.9% wished to quit smoking; by gender, 26.1% of male smokers and 33.6% of female smokers. Meanwhile, to the question of whether they had a medical institution nearby that provided smoking cessation treatment, 34.6% of males and 42.9% of females responded positively. More than 50% of males responded "I don't know" in all ages. In addition, about 50% of the smokers who wanted to quit smoking, both males and females, did not know whether they had a medical institution nearby that provided smoking cessation for Comprehensive Implementation of National Health Promotion")²⁾ sets a goal of lowering the prevalence of tobacco use among adults to 12% by 2022 through the successful smoking cessation of smokers who want to quit smoking. Going forward, continuous efforts are required more than ever.

The Ministry of Health, Labour and Welfare (MHLW) introduced Pharmacy Vision for Patients (shifting from pharmacies adjacent to hospitals to family pharmacies to community care providers)³⁾ in October 2015. In it, family pharmacists/pharmacies are called not only to be local supply centers of necessary medicines (and providers of necessary medication guidance when applicable) but also to be familiar persons/places that patients can go to for reliable advice on medicine and medication, based on the spirit of the separation of pharmacy and clinic. To better respond to patients' choice, it is necessary for family pharmacists/pharmacies to work together with family physicians to administer safe and reliable medication, including that which is administered at home, and provide tailored pharmaceutical management and guidance to each patient, as local providers of comprehensive medical and nursing care service (Integrated Community Care). In light of this vision, the Family Pharmacist/Pharmacy program was launched in April 2016. Based on the report "Health Support Pharmacy" prepared by an MHLW study group on Health Information Center Pharmacies (provisional name)⁴, the Regulations for Implementing the Pharmaceutical Affairs

Law were revised⁵⁾ to include the definition of a Health Support Pharmacy as a pharmacy that has functions necessary for patients' ongoing use and functions that actively support patients' efforts towards health maintenance and promotion. With the introduction of these new programs, local pharmacies are expected to play greater roles as places of health counseling for community residents.

To reduce the number of individuals with tobacco dependence, it is necessary to increase the number of treatment opportunities for habitual smokers. Beyond the target of Health Japan 21 (the second term), which targets individuals who wish to quit smoking, it is necessary to reach out to other smokers. Seeing local pharmacies, which broadly receive community residents, as key players for directing individuals with tobacco dependence to start or continue with their treatment and for connecting them to hospitals and clinics, the project empowers pharmacists to reach out to these individuals directly or indirectly. Local pharmacists can serve as family pharmacists that actively support individuals' efforts towards health maintenance and promotion, sharing information at their pharmacies and community events, such as Health Festivals organized by local pharmacists, to encourage individuals with tobacco dependence to start treatment. In accordance with the School Health and Safety Act, all schools except for colleges and universities are required to have school pharmacists, who provide information to children in the community on the health effect of tobacco use to prevent them from smoking⁶. Expansion of educational activities to prevent smoking has yielded positive results: for example, the ratio of high school senior males who responded that they would smoke in the future decreased from 30.2% in 2000 to 9.0% in 2012.⁷⁾ School pharmacists are thus in a position to provide customized information that can be passed on from the children to their parents, which may motivate the parents to start treatment.

Meanwhile, some of local pharmacies have served as smoking cessation support pharmacies, providing support to individuals with tobacco dependence. However, some of them fail to provide adequate support due to problems in pharmacy management or limited talent/ability of pharmacists. It is therefore important to share challenges and success stories of smoking cessation support pharmacies among local pharmacies and pharmacists.

Furthermore, smoking may be especially prevalent among the elderly on remote islands and dwindling villages with aged populations, with few social resources for health support, including hospitals and pharmacies, which play a key role in providing health information in communities. Special efforts to reach out to these communities are needed.

3. Target Audience

This project aims to promote understanding of tobacco dependence at local pharmacies and among pharmacists and to improve information sharing capabilities for encouraging treatment of

tobacco dependence. The target audience of the project is local pharmacies and pharmacists. Outreach-type health support will be provided by pharmacists to local residents.

4. Project Design and Methods

This project will (1) conduct a survey of challenges faced by pharmacies and pharmacists that provide support to individuals with tobacco dependence, (2) create educational materials that help improve information sharing capabilities of local pharmacists, and (3) provide training to promote understanding of tobacco dependence and outreach-type health support.

(1) Conducting a survey of challenges faced by pharmacies and pharmacists that provide support to individuals with tobacco dependence

This survey is conducted to acquire information that can be used for (2) educational materials and (3) training and health support.

To help individuals with tobacco dependence who have started to consider treatment to actually start and maintain treatment, it is necessary for family pharmacies and health support pharmacies to play central roles in treatment, with programs to receive these individuals for treatment and to partner with hospitals and clinics. However, that it is sometimes difficult for a pharmacy to maintain its function as a smoking cessation support pharmacy due to challenges such as medication inventory management. We must better understand issues to address them. Reduction of a tobacco dependent population requires an increase in the number of individuals with tobacco dependence who choose to undergo treatment. To this end, we need to elucidate factors that may persuade individuals to receive treatment and approach these individuals accordingly.

We will conduct questionnaire surveys targeting pharmacies/pharmacists, and smokers/ex-smokers. The questionnaire will indicate if pharmacies have smoking cessation aids available and what motivated patients who completed the tobacco dependence treatment to start treatment, including whether they were approached by pharmacists.

The questionnaire will be designed upon discussion among joint researchers. Target pharmacies and pharmacists will be selected predominantly from areas where joint researchers are based. For the questionnaire survey among smokers and ex-smokers, we will consider using a research company to reach a broader base. We also plan to use a contractor for data input.

(2) Creating educational materials that help improve information sharing capabilities of local pharmacists

Due to problems in pharmacy management or limited talent/ability of pharmacists, adequate smoking cessation support is not always provided. It is important, therefore, to share challenges and success

stories of smoking cessation support pharmacies among local pharmacies and pharmacists. Promoting understanding of tobacco dependence among non-smokers, including school children, is not only the most effective primary prevention measure against tobacco dependence, but may also serve as a powerful impetus toward treatment of individuals with tobacco dependence.

Based on the results of the surveys mentioned in (1), we will develop materials that will help pharmacists deepen their understanding of the latest findings and of current issues related to tobacco dependence treatment. We will develop educational materials for pharmacists to use to promote understanding of tobacco dependence among school children and other non-smokers, as well as tobacco-dependent individuals.

The joint researchers will discuss and decide the content of the educational materials. Once the materials are developed, a set number of copies arranged by district pharmaceutical associations will be distributed by the Japan Pharmaceutical Association and an electronic copy will be made available online.

(3) Providing training to promote understanding of tobacco dependence and outreach-type health support

Pharmacists who support treatment require continued education and training, as it is essential for them to provide appropriate information to individuals with tobacco dependence.

To this end, seminars will be held for pharmacists to expand their knowledge of tobacco dependence treatment. School pharmacists have been active in educating students on substance abuse prevention at school. In elementary schools, in particular, one out of three schools (33.3% in 2013) have lectures, etc. They could discuss tobacco dependence as an example of dependence. We will offer seminars to empower pharmacists to speak at these occasions at their schools in such a way as to prompt students to encourage their parents to stop smoking.

We will discuss with the Japan Pharmaceutical Association to determine the venue and date. We will consider offering the seminars as part of continuing education organized by the Japan Pharmaceutical Association and local pharmaceutical associations. Seminar invitation will be sent from the Japan Pharmaceutical Association to prefectural pharmaceutical associations to ensure that all JPA members, especially those near the venue, are informed of the event.

There seems to be generational as well as geographical differences in opinions on smoking. Smoking poses a greater problem on remote islands and dwindling villages with aged populations, and with little social resources for health support, including hospitals and pharmacies, which play a key role in providing health information in communities. Further, in these areas, smoking habits may be deeply rooted among elderly residents, in particular. It is therefore believed beneficial for local pharmacists to travel to remote islands to provide appropriate information to individuals with tobacco dependence at

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health fairs or similar events.

The Okinawa Pharmaceutical Association offers outreach-type health support by pharmacies/pharmacists and it plans to add outreach to individuals with tobacco dependence to its list of services.

5. Evaluation Design

(1) Conducting a survey of challenges faced by pharmacies and pharmacists that provide support to individuals with tobacco dependence

Creation of a survey report.

Reporting the survey results at relevant academic conferences to share the knowledge widely.

(2) Creating educational materials that help improve information sharing capabilities of local pharmacists

Creation of educational materials.

Number of copies of education materials distributed (10,000+ for pharmacists, 30,000+ for school children).

(3) Providing training to promote understanding of tobacco dependence and outreach-type health support

Evaluation by the number of seminars held for pharmacists, number of attendees, and assessment by the attendees. (With 100 to 200 pharmacists expected to attend per seminar, we will provide training opportunities to a total of 600 to 1200 pharmacists.)

Number of pharmacists who use the educational materials: Suppose one pharmacist out of ten who attend a seminar will use the educational materials. That means 60 to 120 pharmacists will be presenting a lecture to school children. If there are 30 students in a class and five classes per grade, 9,000 to 18,000 school children will receive a lesson based on the educational materials that are created through this project. (Typically school pharmacists' lessons and lectures are given to an entire grade of children.)

Number of pharmacists who provided smoking cessation support in remote islands and similar areas, and the number of individuals who received such support.

The educational materials created through this project will be widely shared via a website which we plan to launch for this project.

Together with the participants in our seminars, we will explore effective ways of using these materials and survey results obtained from this project, and we will share these materials with relevant individuals through the participants.

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6. Detailed Workplan and Deliverables

(1) Conducting a survey of challenges faced by pharmacies and pharmacists that provide support to individuals with tobacco dependence

We will create the questionnaire three to six months after the start of the project, and conduct surveys and analyze results within one year of the start of the project.

Start -3^{rd} month	3^{rd} month -6^{th} month	6^{th} month -9^{th} month	9^{th} month -12^{th}			
			month			
Determine the content	Create the	Conduct surveys	Analyze the results			
of questionnaires	questionnaires					
$12^{\text{th}} \text{ month} - 24^{\text{th}} \text{ month}$						
Develop a report, give a corresponding presentation at an academic conference						

(2) Creating educational materials that help improve information sharing capabilities of local pharmacists

We will develop educational materials for promoting understanding of tobacco dependence among school children within one year of the start of the project. The materials based on the results of the survey results will be developed from six months after the start of the project within a year and a half of the start of the project.

6 th month after start - 9 th month	9 th 1	month – 12 th month	12^{th} month -24^{th} month		
Determine the content	Develop the content		Distribute bo	Distribute booklets; school pharmacists use	
of educational	of educational		1	them for lectures	
materials for school	materials for school				
children		children			
			ter start – 18 th nth	18^{th} month -24^{th} month	
		ional materials	Distribute booklets, and trainers use them for seminars for pharmacists		

(3) Providing training to promote understanding of tobacco dependence and outreach-type health support

They will be held at about three sites per year, from project start to project completion.

Outreach-type health support by pharmacies/pharmacists will be conducted within one year of project

start.

Start -6^{th} month	6^{th} month -12^{th}	12^{th} month -24^{th}	$18^{th} month - 24^{th}$			
	month	month	month			
Seminar (throughout the year, three times/year)						
Outreach-type health support (three sites or more)						